

11/12/04

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 Lys Arg Met Leu Asp Pro Ser Ile Lys Gly Thr Phe His Trp Ser Gly
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Ser Glu Met Pro Gln Leu Val Lys Gly Met Lys Leu Leu Asn Gln Ala
      180              185              190
Asp Pro Cys Val Gln Ile Leu Ile Gln Glu Thr Gly Glu His Val Leu
      195              200              205
Val Thr Ala Gly Glu Val His Leu Gln Arg Cys Leu Asp Asp Leu Lys
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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Leu Ala Gln Lys Thr Asn Lys Ala Trp Ala Lys Gly Asp Ile Gln Gly

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| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| | 35 | | 40 | | 45 | |
| Ala | Gly | Ala | Ala | Ser | Arg | Arg |
| | 50 | | 55 | | 60 | |
| Gly | Leu | Gly | Val | Cys | Thr | Tyr |
| 65 | | | 70 | | 75 | |
| Tyr | Leu | Ala | Ser | Arg | Asp | Pro |
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<210> 5839
 <211> 1895
 <212> DNA
 <213> Homo sapiens

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<210> 5840

<211> 138

<212> PRT

<213> Homo sapiens

<400> 5840

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| Asn | Asp | Thr | Pro | Gly | Ala | Leu | Leu | Arg | Gly | Glu | Asp | Arg | Cys | Trp | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Met | Val | His | Gly | Trp | Cys | Pro | Val | Ile | Phe | Ser | Trp | Ala | Val | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Arg | Gly | Ser | Gly | Phe | Pro | Ala | Gln | Gly | Ile | Phe | Asp | Pro | Cys | Gln |
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| Arg | Arg | Glu | Arg | Glu | Leu | Ser | Trp | Phe | Pro | Phe | His | Leu | Phe | Ser | Gly |
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| Cys | Phe | Lys | Ala | Asn | Ile | Pro | Val | Pro | Asn | Val | Leu | Cys | Gly | Leu | Asn |
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| Pro | Gly | Arg | Gly | Gln | Gly | His | Ile | Gln | Val | Gly | Leu | Ala | Ser | Ser | Thr |
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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 5842

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ala | Lys | Trp | Lys | Trp | Arg | Arg | Glu | Met | Glu | Arg | Pro | His | Pro | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Thr | Leu | Trp | Gly | His | Glu | Asn | Pro | Phe | Ser | Asp | Leu | Pro | Ser | Gly | Thr |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Asn | Phe | His | Pro | Val | Trp | Thr | Ser | Arg | Thr | Cys | Ser | Arg | Pro | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Cys | Leu | Ser | Gln | Ile | Val | Gln | Leu | Lys | Ala | Ile | Asn | Val | Asp | Leu |
| | 65 | | | | 70 | | | | 75 | | | | | 80 | |
| Gln | Ser | Asp | Ala | Ala | Leu | Gln | Val | Asp | Ile | Ser | Asp | Ala | Leu | Ser | Glu |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Asp | Lys | Val | Lys | Phe | Thr | Val | His | Thr | Lys | Ser | Ser | Leu | Pro | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Phe | Lys | Gln | Asn | Glu | Phe | Ser | Val | Val | Arg | Gln | His | Glu | Glu | Phe | Ile |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Trp | Leu | His | Asp | Ser | Phe | Val | Glu | Asn | Glu | Asp | Tyr | Ala | Gly | Tyr | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
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| Val | Met | Glu | Glu | Leu | Gln | Arg | His | His | Glu | Arg | Glu | Leu | Gln | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gln | Glu | Lys | Glu | Trp | Leu | Leu | Ala | Glu | Glu | Thr | Ala | Ala | Thr | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Ala | Ile | Glu | Ala | Met | Lys | Lys | Ala | Tyr | Gln | Glu | Glu | Leu | Ser | Arg |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Glu | Leu | Ser | Lys | Thr | Arg | Ser | Leu | Gln | Gln | Gly | Pro | Asp | Gly | Leu | Arg |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Lys | Gln | His | Gln | Ser | Asp | Val | Glu | Ala | Leu | Lys | Arg | Glu | Leu | Gln | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Leu | Ser | Glu | Gln | Tyr | Ser | Gln | Lys | Cys | Leu | Glu | Ile | Gly | Ala | Leu | Met |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Arg | Gln | Ala | Glu | Glu | Arg | Glu | His | Thr | Leu | Arg | Arg | Cys | Gln | Gln | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Gln | Glu | Leu | Leu | Arg | His | Asn | Gln | Glu | Leu | His | Gly | Arg | Leu | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Glu | Ile | Asp | Gln | Leu | Arg | Gly | Phe | Ile | Ala | Ser | Gln | Gly | Met | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asn | Gly | Cys | Gly | Arg | Ser | Asn | Glu | Arg | Ser | Ser | Cys | Glu | Leu | Glu | Val |
| | | | 165 | | | | 170 | | | | | | | 175 | |
| Leu | Leu | Arg | Val | Lys | Glu | Asn | Glu | Leu | Gln | Tyr | Leu | Lys | Lys | Glu | Val |
| | | 180 | | | | | 185 | | | | | | 190 | | |
| Gln | Cys | Leu | Arg | Asp | Glu | Leu | Gln | Met | Met | Gln | Lys | Asp | Lys | Arg | Phe |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Thr | Ser | Gly | Lys | Tyr | Gln | Asp | Val | Tyr | Val | Glu | Leu | Ser | His | Ile | Lys |

| | | | | |
|---------------------|-------------------------|---------------------|-----|-----|
| 210 | | 215 | | 220 |
| Thr Arg Ser Glu Arg | Glu Ile Glu Gln Leu Lys | Glu His Leu Arg Leu | | |
| 225 | 230 | 235 | 240 | |
| Ala Met Ala Ala Leu | Gln Glu Lys Glu Ser Met | Arg Asn Ser Leu Ala | | |
| | 245 | 250 | 255 | |

Glu

<210> 5847
 <211> 1021
 <212> DNA
 <213> Homo sapiens

<400> 5847
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 120
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 180
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 240
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<210> 5848
 <211> 120
 <212> PRT

<213> Homo sapiens

<400> 5848

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 35 40 45
 Gly Ser Ile Arg Gly Ala Ala Pro Val Ala Val Glu Pro Gly Ala Ala
 50 55 60
 Val Arg Ser Leu Leu Ser Pro Gly Leu Leu Pro His Leu Leu Pro Ala
 65 70 75 80
 Leu Gly Phe Lys Asn Lys Thr Val Leu Lys Lys Arg Cys Lys Asp Cys
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 Tyr Leu Val Lys Arg Arg Gly Arg Trp Tyr Val Tyr Cys Lys Thr His
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 Pro Arg His Lys Gln Arg Gln Met
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<210> 5849

<211> 3174

<212> DNA

<213> Homo sapiens

<400> 5849

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 120
 aaaaatctca agaccacagg acagcgtgag cccaccccc ctcccccaat gacccagca
 180
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 240
 aagccaccgg ccatggaaat tagtacagaa cccccccaca cacactcaga cacaggatac
 300
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 840

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<210> 5850

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5850

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Gly | Lys | Val | Ala | Ala | Val | Leu | Asp | Ala | His | Leu | Ser | Arg | Gln |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| His | Ser | Val | Pro | Ala | Tyr | Pro | Trp | Asp | Trp | Gly | His | Leu | Ile | Arg | Phe |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Cys | Thr | Gln | Thr | Gly | His | Ala | Gln | Pro | Cys | Pro | Ser | Ala | Pro | Ser | Thr |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Gly | Pro | Ile | His | Ile | Ala | Glu | Gly | Gly | Arg | Gly | Arg | Pro | Pro | Pro | Gly |
| | 50 | | | | 55 | | | | | | 60 | | | | |
| Ser | Ala | Ser | Asn | Pro | Gln | Pro | Pro | Gly | Ser | Pro | His | Cys | Pro | Ser | Ala |
| 65 | | | 70 | | | | | | 75 | | | | | 80 | |
| Gly | Leu | Ser | Pro | Val | Pro | Gly | Val | Gly | Gly | Arg | Gln | Cys | Pro | Gly | Thr |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Val | Pro | Arg | Val | Arg | Arg | Pro | Gly | Leu | Ala | Gly | His | Pro | Val | Thr | His |
| | | 100 | | | | | 105 | | | | | | 110 | | |
| Arg | Ile | Asn | Arg | Lys | Thr | Ala | Ser | Pro | Pro | Asn | Leu | Cys | Pro | Arg | His |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Asn | Met | Ser | Arg | Ser | Glu | Ser | Cys | Thr | Pro | Arg | Ser | Arg | Ala | Pro | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gln | Arg | Thr | Leu | Thr | Pro | Pro | Arg | Gly | Ala | | | | | | |
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<210> 5851

<211> 488

<212> DNA

<213> Homo sapiens

<400> 5851

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180
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240
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300
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360
tgctgccatg gttacatcct cagacgtttt attatcaact gtttccacag atgcattcct
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<210> 5852

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5852

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Asn Lys Thr Ser Glu Asp Val Thr Met Ala Ala Ala Ser Pro Val Thr
20          25          30
Leu Thr Lys Gly Thr Ser Ala Ala His Leu Asn Ser Met Glu Val Thr
35          40          45
Thr Glu Asp Thr Ser Arg Thr Asp Ala Tyr Glu Ser Tyr Lys Lys Lys
50          55          60
Asp Tyr Thr Gln Val Asp Tyr Leu Ile Asn Gly Met Tyr Ala Asp Ser
65          70          75          80
Glu Met

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<210> 5853

<211> 487

<212> DNA

<213> Homo sapiens

<400> 5853

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120
tcaggcccag cagctccatg gaggacgccg gcgaggaccc caccacgttt gctgcccact
180

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ctctgcccag tgacccccgt ctcttggcca ctgtgaccaa cgcatacctg ggcacacgag
 240
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 360
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<210> 5854

<211> 68

<212> PRT

<213> Homo sapiens

<400> 5854

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| Arg | Glu | Trp | Lys | Val | Gln | Arg | Pro | Glu | Leu | Arg | Glu | Ala | Ser | Gly | Asp |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Tyr | Arg | Arg | Ser | Gln | Glu | Gly | Gly | Pro | Ala | Arg | Pro | Ala | Ala | Pro | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Pro | Ser | Gly | Arg | Ser | Gly | Pro | Ala | Ala | Pro | Trp | Arg | Thr | Pro | Ala |
| | | | 35 | | | | | 40 | | | | | 45 | | |
| Arg | Thr | Pro | Pro | Arg | Leu | Leu | Pro | Thr | Leu | Cys | Pro | Val | Thr | Pro | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Trp | Pro | Leu | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | |

<210> 5855

<211> 362

<212> DNA

<213> Homo sapiens

<400> 5855

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 180
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 362

<210> 5856

<211> 113

<212> PRT

<213> Homo sapiens

<400> 5856

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 35 40 45
 Lys Arg Glu Gly Val Asn Glu Val Val Ala Glu Val Leu Leu Ala Ala
 50 55 60
 His Glu Gly Val Gly Asp Gln Gly Glu Ala Gly Ala His Pro Val Leu
 65 70 75 80
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<210> 5857

<211> 1751

<212> DNA

<213> Homo sapiens

<400> 5857

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<210> 5858

<211> 434

<212> PRT

<213> Homo sapiens

<400> 5858

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| Met | Asp | Ser | Val | Glu | Lys | Gly | Ala | Ala | Thr | Ser | Val | Ser | Asn | Pro | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Arg | Pro | Ser | Arg | Gly | Arg | Pro | Pro | Lys | Leu | Gln | Arg | Asn | Ser | Arg |
| | | 20 | | | | | 25 | | | | | | 30 | | |
| Gly | Gly | Gln | Gly | Arg | Gly | Gly | Glu | Lys | Pro | Pro | His | Leu | Ala | Ala | Leu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Ile | Leu | Ala | Arg | Gly | Gly | Ser | Lys | Gly | Ile | Pro | Leu | Lys | Asn | Ile | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| His | Leu | Ala | Gly | Val | Pro | Leu | Ile | Gly | Trp | Val | Leu | Arg | Ala | Ala | Leu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Asp | Ser | Gly | Ala | Phe | Gln | Ser | Val | Trp | Val | Ser | Thr | Asp | His | Asp | Glu |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Glu | Asn | Val | Ala | Lys | Gln | Phe | Gly | Ala | Gln | Val | His | Arg | Arg | Ser |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Ser | Glu | Val | Ser | Lys | Asp | Ser | Ser | Thr | Ser | Leu | Asp | Ala | Ile | Ile | Glu |

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Thr Ser Pro Cys Leu His Pro Thr Asp Leu Gln Lys Val Ala Glu Met
  145      150      155      160
Ile Arg Glu Glu Gly Tyr Asp Ser Val Phe Ser Val Val Arg Arg His
      165      170      175
Gln Phe Arg Trp Ser Glu Ile Gln Lys Gly Val Arg Glu Val Thr Glu
      180      185      190
Pro Leu Asn Leu Asn Pro Ala Lys Arg Pro Arg Arg Gln Asp Trp Asp
      195      200      205
Gly Glu Leu Tyr Glu Asn Gly Ser Phe Tyr Phe Ala Lys Arg His Leu
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Ile Glu Met Gly Tyr Leu Gln Gly Gly Lys Met Ala Tyr Tyr Glu Met
  225      230      235      240
Arg Ala Glu His Ser Val Asp Ile Asp Val Asp Ile Asp Trp Pro Ile
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Ala Glu Gln Arg Val Leu Arg Tyr Gly Tyr Phe Gly Lys Glu Lys Leu
      260      265      270
Lys Glu Ile Lys Leu Leu Val Cys Asn Ile Asp Gly Cys Leu Thr Asn
      275      280      285
Gly His Ile Tyr Val Ser Gly Asp Gln Lys Glu Ile Ile Ser Tyr Asp
      290      295      300
Val Lys Asp Ala Ile Gly Ile Ser Leu Leu Lys Lys Ser Gly Ile Glu
  305      310      315      320
Val Arg Leu Ile Ser Glu Arg Ala Cys Ser Lys Gln Thr Leu Ser Ser
      325      330      335
Leu Lys Leu Asp Cys Lys Met Glu Val Ser Val Ser Asp Lys Leu Ala
      340      345      350
Val Val Asp Glu Trp Arg Lys Glu Met Gly Leu Cys Trp Lys Glu Val
      355      360      365
Ala Tyr Leu Gly Asn Glu Val Ser Asp Glu Glu Cys Leu Lys Arg Val
      370      375      380
Gly Leu Ser Gly Ala Pro Ala Asp Ala Cys Ser Thr Ala Gln Lys Ala
  385      390      395      400
Val Gly Tyr Ile Cys Lys Cys Asn Gly Gly Arg Gly Ala Ile Arg Glu
      405      410      415
Phe Ala Glu His Ile Cys Leu Leu Met Glu Lys Val Asn Asn Ser Cys
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Gln Lys

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<210> 5859

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 5859

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<210> 5860
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 5860
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 35 40 45
 Gln Met Gly Leu Gly Arg Cys Arg Phe Cys Phe Ser Pro Trp Leu Pro
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 <212> DNA
 <213> Homo sapiens

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<210> 5862
 <211> 514
 <212> PRT
 <213> Homo sapiens

<400> 5862

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Pro Asp Leu Lys Val Ile Tyr Ile Leu Val Arg Pro Lys Ala Gly Gln
      35           40           45
Thr Leu Gln Gln Arg Val Phe Gln Ile Leu Asp Ser Lys Leu Phe Glu
      50           55           60
Lys Val Lys Glu Val Cys Pro Asn Val His Glu Lys Ile Arg Ala Ile
65           70           75           80
Tyr Ala Asp Leu Asn Gln Asn Asp Phe Ala Ile Ser Lys Glu Asp Met
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Gln Glu Leu Leu Ser Cys Thr Asn Ile Ile Phe His Cys Ala Ala Thr
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Val Arg Phe Asp Asp Thr Leu Arg His Ala Val Gln Leu Asn Val Thr
      115          120          125
Ala Thr Arg Gln Leu Leu Leu Met Ala Ser Gln Met Pro Lys Leu Glu
      130          135          140
Ala Phe Ile His Ile Ser Thr Ala Tyr Ser Asn Cys Asn Leu Lys His
145          150          155          160
Ile Asp Glu Val Ile Tyr Pro Cys Pro Val Glu Pro Lys Lys Lys Ile
      165          170          175
Ile Asp Ser Leu Glu Trp Leu Asp Asp Ala Ile Ile Asp Glu Ile Thr
      180          185          190
Pro Lys Leu Ile Arg Asp Trp Pro Asn Ile Tyr Thr Tyr Thr Lys Ala
      195          200          205
Leu Gly Glu Met Val Val Gln Gln Glu Ser Arg Asn Leu Asn Ile Ala
      210          215          220
Ile Ile Arg Pro Ser Ile Val Gly Ala Thr Trp Gln Glu Pro Phe Pro
225          230          235          240
Gly Trp Val Asp Asn Ile Asn Gly Pro Asn Gly Ile Ile Ile Ala Thr
      245          250          255
Gly Lys Gly Phe Leu Arg Ala Ile Lys Ala Thr Pro Met Ala Val Ala
      260          265          270
Asp Val Ile Pro Val Asp Thr Val Val Asn Leu Met Leu Ala Val Gly
      275          280          285
Trp Tyr Thr Ala Val His Arg Pro Lys Ser Thr Leu Val Tyr His Ile
      290          295          300
Thr Ser Gly Asn Met Asn Pro Cys Asn Trp His Lys Met Gly Val Gln
305          310          315          320
Val Leu Ala Thr Phe Glu Lys Ile Pro Phe Glu Arg Pro Phe Arg Arg
      325          330          335
Pro Asn Ala Asn Phe Thr Ser Asn Ser Phe Thr Ser Gln Tyr Trp Asn
      340          345          350
Ala Val Ser His Arg Ala Pro Ala Ile Ile Tyr Asp Cys Tyr Leu Arg
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Leu Thr Gly Arg Lys Pro Arg Met Thr Lys Leu Met Asn Arg Leu Leu

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Ser Thr Tyr Asn Thr Glu Met Leu Met Ser Glu Leu Ser Pro Glu Asp
      405              410              415
Gln Arg Val Phe Asn Phe Asp Val Arg Gln Leu Asn Trp Leu Glu Tyr
      420              425              430
Ile Glu Asn Tyr Val Leu Gly Val Lys Lys Tyr Leu Leu Lys Glu Asp
      435              440              445
Met Ala Gly Ile Pro Lys Ala Lys Gln Arg Leu Lys Arg Leu Arg Asn
      450              455              460
Ile His Tyr Leu Phe Asn Thr Ala Leu Phe Leu Ile Ala Trp Arg Leu
465              470              475              480
Leu Ile Ala Arg Ser Gln Met Ala Arg Asn Val Trp Phe Phe Ile Val
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Lys Val

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<210> 5863
 <211> 438
 <212> DNA
 <213> Homo sapiens

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<210> 5864
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 5864
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 Cys Gln Tyr Leu Ser Tyr Val Pro Phe Met Ala Glu Tyr Gln Ser Lys

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<211> 1229
<212> DNA
<213> Homo sapiens
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1140

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<210> 5866
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 5866
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 35 40 45
 Phe Val Leu Pro Thr Glu Gln Phe His Leu Gly Lys Ile Glu Glu Leu
 50 55 60
 Leu Val Glu Arg Thr Gly Ala Pro Phe Cys Ser Pro Thr Ser Ser Gly
 65 70 75 80
 Trp Arg Arg Ser Arg Ala Ser Ala Ile Ala Ala Gly Val His Pro Gln
 85 90 95
 Asp Ala Met Arg Ser Val Thr Lys Gln Ala Ile Arg Glu Ala Arg Leu
 100 105 110
 Lys Glu Ile Lys Glu Glu Leu Leu His Ser Glu Lys Leu Lys Thr Tyr
 115 120 125
 Phe Glu Asp Asn Pro Arg Asp Leu Gln Leu Leu Arg His Asp Leu Pro
 130 135 140
 Leu His Pro Ala Val Val Lys Pro His Leu Gly His Val Pro Asp Tyr
 145 150 155 160
 Leu Val Pro Pro Ala Leu Arg Gly Leu Val Arg Pro His Lys Lys Arg
 165 170 175
 Lys Lys Leu Ser Ser Ser Cys Arg Lys Ala Lys Arg Ala Lys Ser Gln
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 Asn Pro Leu Arg Ser Phe Lys His Lys Gly Lys Lys Phe Arg Pro Thr
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 210

<210> 5867
 <211> 1882
 <212> DNA
 <213> Homo sapiens

<400> 5867
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<210> 5868
<211> 131
<212> PRT
<213> Homo sapiens

<400> 5868
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35 40 45
Ile Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Glu Gln Leu Val Glu Asp
50 55 60
Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu Ile
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Leu Lys Asp Lys Lys Leu Ile Lys Ala Phe Phe Glu Val Leu Ala His
85 90 95
Pro Gln Asn Tyr Phe Lys Tyr Thr Glu Lys His Lys Glu Met Leu Pro
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<210> 5869
<211> 910
<212> DNA
<213> Homo sapiens

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<210> 5870

<211> 129

<212> PRT

<213> Homo sapiens

<400> 5870

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| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Ser | Leu | Gln | Tyr | Gln | Ile | Gln | Ser | Val | Val | Arg | Met | Lys | Cys | Gly |
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| Gly | Leu | Val | Thr | Glu | Glu | Ala | Val | Glu | Arg | Arg | Arg | Ala | Trp | Val | Ala |
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<211> 2217

<212> DNA

<213> Homo sapiens

<400> 5871

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<212> PRT

<213> Homo sapiens

<400> 5872

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| Glu | Ala | Ser | Pro | Val | Val | Val | Glu | Lys | Ser | Asn | Ser | Tyr | Pro | His | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Tyr | Thr | Ser | Ser | Ser | His | His | Ser | His | Ser | Tyr | Ile | Gly | Leu | Pro |
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| Ser | Pro | Pro | Pro | Ser | Val | Leu | Ile | Ser | Lys | Asn | Glu | Val | Gly | Ile | Phe |
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| Thr | Thr | Pro | Asn | Phe | Asp | Glu | Thr | Ser | Ser | Ala | Thr | Thr | Ile | Ser | Thr |
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| Phe | Thr | His | Asp | Asp | Gly | Tyr | Met | Ile | Cys | Cys | Asp | Lys | Cys | Ser | Val |
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| Trp | Gln | His | Ile | Asp | Cys | Met | Gly | Ile | Asp | Arg | Gln | His | Ile | Pro | Asp |
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| Glu | Glu | Ala | Asn | Asn | Asn | Gln | Tyr | Ser | Glu | Gly | Val | Gln | Arg | Glu | Ala |
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<212> DNA

<213> Homo sapiens

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| Pro | Val | Glu | Pro | Arg | Leu | Leu | Ala | Pro | Ala | Asn | Ser | Lys | Glu | Gly | Val |
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<213> Homo sapiens

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<400> 5880

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Tyr Lys Val His Glu Lys Asn Arg Ser Tyr Thr Trp Leu Glu Lys Gln
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His Gly Pro Tyr Gly Ala Gly Ala Phe Phe Ile Leu Lys Gln Gly Gly
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His Phe Ser Gln Glu Phe Trp Asn Phe Cys Glu Val Pro Val Glu Ala
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Val Asp Ala Gly Asp Cys Asp Ile Asn Tyr Glu Gly Leu Asp Asn Leu
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Arg Thr Ser Ala Gly Trp Thr Ser Arg Thr Ser Leu Pro Cys Pro Thr
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 Ala Pro Ser Leu Asp Asp Pro Ala Arg Arg His Met Thr Ile His Val
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 Pro Leu Asp Ala Ser Arg Ser Lys Gln Leu Ile Ser Glu Trp Lys Gln
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<210> 5883

<211> 579

<212> DNA

<213> Homo sapiens

<400> 5883

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<213> Homo sapiens

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<211> 1905

<212> DNA

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<400> 5885

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| Gly | Ala | Gly | Pro | Leu | Tyr | Ser | His | His | Leu | Pro | Thr | Ser | Pro | Leu | Gln |
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| Lys | Ala | Leu | Leu | Ala | Ala | Gly | Ser | Ala | Ala | Met | Ala | Leu | Tyr | Asn | Pro |
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| Tyr | Arg | His | Asp | Met | Val | Ala | Val | Leu | Gly | Glu | Thr | Thr | Gly | His | Arg |
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| Thr | Leu | Lys | Val | Leu | Arg | Asp | Gln | Met | Arg | Arg | Asp | Pro | Glu | Gly | Ala |
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| Gln | Ile | Leu | Gln | Glu | Arg | Pro | Arg | Ile | Ser | Thr | Ser | Thr | Leu | Asp | Leu |
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| Arg | Phe | Val | Asp | Asp | Glu | Glu | Leu | Ala | Tyr | Val | Ile | Gln | Arg | Tyr | Arg |
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| | | | | | |
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| Gln Ser Leu Gln Val Leu Val Ser Glu Leu Ile Pro Trp Ala Val Gln | | | | | |
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| Asn Gly Arg Arg Ala Pro Cys Val Leu Asn Leu Tyr Tyr Glu Arg Arg | | | | | |
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| Trp Glu Gln Ser Leu Arg Ala Leu Arg Glu Glu Leu Gly Ile Thr Ala | | | | | |
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<211> 3779

<212> DNA

<213> Homo sapiens

<400> 5887

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<211> 166

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<213> Homo sapiens

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| Glu | Asp | Arg | Asp | Thr | Val | Val | Glu | Gly | Leu | Arg | Arg | Leu | Ser | Asp | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Glu | Tyr | Met | Trp | Phe | Leu | Leu | Tyr | Cys | Glu | Gly | Thr | Arg | Phe | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Thr | Lys | His | Arg | Val | Ser | Met | Glu | Val | Ala | Ala | Ala | Lys | Gly | Leu |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Pro | Val | Leu | Lys | Tyr | His | Leu | Leu | Pro | Arg | Thr | Lys | Gly | Phe | Thr | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Val | Lys | Cys | Leu | Arg | Gly | Thr | Val | Ala | Ala | Val | Tyr | Asp | Val | Thr |

| | | | | | | | | | | | | | | | | | | | |
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| | | | | 85 | | | | | | 90 | | | | | 95 | | | | |
| Leu | Asn | Phe | Arg | Gly | Asn | Lys | Asn | Pro | Ser | Leu | Leu | Gly | Ile | Leu | Tyr | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | |
| Gly | Lys | Lys | Tyr | Glu | Ala | Asp | Met | Cys | Val | Arg | Arg | Phe | Pro | Leu | Glu | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | |
| Asp | Ile | Pro | Leu | Asp | Glu | Lys | Glu | Ala | Ala | Gln | Trp | Leu | His | Lys | Leu | | | | |
| | 130 | | | | | 135 | | | | 140 | | | | | | | | | |
| Tyr | Gln | Glu | Lys | Asp | Ala | Leu | Gln | Glu | Val | Lys | Thr | Leu | Asp | Gly | Met | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | |
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<210> 5889

<211> 2198

<212> DNA

<213> Homo sapiens

<400> 5889

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<211> 118

<212> PRT

<213> Homo sapiens

<400> 5890

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| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Leu | Pro | Leu | Val | Ala | Gly | Arg | Asp | Ser | Leu | Ala | Leu | Phe | Pro | Arg | Leu |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Glu | Cys | Ser | Gly | Thr | Ile | Thr | Ala | His | Cys | Ser | Leu | Asp | Phe | Pro | Gly |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Ser | His | Ser | Pro | Thr | Ser | Ala | Ser | Gln | Ala | Val | Gly | Thr | Thr | Gly |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Glu | Glu | Arg | Gln | Gln | His | Gly | Glu | Cys | Pro | Val | Pro | Thr | Pro | Trp | Lys |

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<212> DNA

<213> Homo sapiens

<400> 5891

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1200

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<211> 212

<212> PRT

<213> Homo sapiens

<400> 5892

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Leu | Arg | Lys | Arg | Arg | Tyr | His | Ala | Ala | Leu | Ala | Val | Leu | Lys | Gly |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Phe | Arg | Asn | Gly | Ala | Val | Tyr | Gly | Ala | Lys | Ile | Arg | Ala | Pro | His | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Val | Met | Thr | Phe | Leu | Phe | Arg | Asn | Gly | Ser | Leu | Gln | Glu | Lys | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Ala | Ile | Leu | Gln | Ala | Thr | Tyr | Ile | His | Ser | Trp | Asn | Leu | Ala | Arg |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Phe | Val | Phe | Thr | Tyr | Lys | Gly | Leu | Arg | Ala | Leu | Gln | Ser | Tyr | Ile | Gln |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Gly | Lys | Thr | Tyr | Pro | Ala | His | Ala | Phe | Leu | Ala | Ala | Phe | Leu | Gly | Gly |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Ile | Leu | Val | Phe | Gly | Glu | Asn | Asn | Asn | Ile | Asn | Ser | Gln | Ile | Asn | Met |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Tyr | Leu | Leu | Ser | Arg | Val | Leu | Phe | Ala | Leu | Ser | Arg | Leu | Ala | Val | Glu |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Lys | Gly | Tyr | Ile | Pro | Glu | Pro | Arg | Trp | Asp | Pro | Phe | Pro | Leu | Leu | Thr |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ala | Val | Val | Trp | Gly | Leu | Val | Leu | Trp | Leu | Phe | Glu | Tyr | His | Arg | Ser |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Thr | Leu | Gln | Pro | Ser | Leu | Gln | Ser | Ser | Met | Thr | Tyr | Leu | Tyr | Glu | Asp |
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| Ser | Asn | Val | Trp | His | Asp | Ile | Ser | Asp | Phe | Leu | Val | Tyr | Asn | Lys | Ser |
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<211> 1389

<212> DNA

<213> Homo sapiens

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<210> 5894

<211> 260

<212> PRT

<213> Homo sapiens

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50           55           60
Tyr Cys Ser Thr Arg Ile Tyr Ala Ser Met Lys Cys Pro Asp Gln Lys
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Cys Leu Tyr Thr Cys Gln Ile Lys Asp Gly Gly Val Gln Pro Gln Phe
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Glu Ile Val Pro Glu Asp Asp Pro Gln Asn Ala Ile Val Ser Ser Ser
100          105          110
Ala Asp Ala Cys His Ala Glu Leu Leu Arg Thr Ile Ser Thr Thr Met
115          120          125
Gly Lys Leu Met Pro Asn Leu Leu Pro Ala Gly Ala Asp Phe Phe Gly
130          135          140
Phe Ser His Pro Ala Ile His Asn Leu Ile Gln Ser Cys Pro Gly Ala
145          150          155          160
Arg Lys Cys Ile Asn Tyr Gln Trp Val Lys Phe Asp Val Cys Lys Pro
165          170          175
Gly Asp Gly Gln Leu Pro Glu Gly Leu Pro Glu Asn Asp Ala Ala Met
180          185          190
Ser Phe Glu Ala Phe Gln Arg Gln Ile Phe Asp Glu Asp Gln Asn Asp
195          200          205
Pro Leu Leu Pro Gly Ser Leu Asp Leu Pro Glu Leu Gln Pro Ala Ala
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420

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<211> 261

<212> PRT

<213> Homo sapiens

<400> 5896

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Ala | Thr | Gln | Arg | Ile | Ser | Arg | Pro | Ile | Val | Asn | Leu | Phe | Val | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Asp | Leu | Gly | Gly | Ser | Ser | Ala | Ala | Thr | Glu | Ala | Val | Ala | Ile | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Ala | Thr | Tyr | Pro | Val | Gly | His | Met | Pro | Tyr | Gly | Trp | Leu | Thr | Glu |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Ile | Arg | Ala | Val | Tyr | Pro | Ala | Phe | Asp | Lys | Asn | Asn | Pro | Ser | Asn | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Val | Ser | Thr | Ser | Asn | Thr | Val | Thr | Ala | Ala | His | Ile | Lys | Lys | Phe |
| | | | | 85 | | | | | 90 | | | | 95 | | |
| Thr | Phe | Val | Cys | Met | Ala | Leu | Ser | Leu | Thr | Leu | Cys | Phe | Val | Met | Phe |
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| Trp | Thr | Pro | Asn | Val | Ser | Glu | Lys | Ile | Leu | Ile | Asp | Ile | Ile | Gly | Val |
| | | 115 | | | | | 120 | | | | 125 | | | | |
| Asp | Phe | Ala | Phe | Ala | Glu | Leu | Cys | Val | Val | Pro | Leu | Arg | Ile | Phe | Ser |
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| Phe | Phe | Pro | Val | Pro | Val | Thr | Val | Arg | Ala | His | Leu | Thr | Gly | Trp | Leu |
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| Met | Thr | Leu | Lys | Lys | Thr | Phe | Val | Leu | Ala | Pro | Ser | Ser | Val | Leu | Arg |
| | | | | 165 | | | | | 170 | | | | 175 | | |
| Ile | Ile | Val | Leu | Ile | Ala | Ser | Leu | Val | Val | Leu | Pro | Tyr | Leu | Gly | Val |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 180 | | 185 | | 190 | | | | | | | | | | |
| His | Gly | Ala | Thr | Leu | Gly | Val | Gly | Ser | Leu | Leu | Ala | Gly | Phe | Val | Gly |
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| Glu | Ser | Thr | Met | Val | Ala | Ile | Ala | Ala | Cys | Tyr | Val | Tyr | Arg | Lys | Gln |
| | 210 | | | | 215 | | | | 220 | | | | | | |
| Lys | Lys | Lys | Met | Glu | Asn | Glu | Ser | Ala | Thr | Glu | Gly | Glu | Asp | Ser | Ala |
| 225 | | | | 230 | | | | 235 | | | | | 240 | | |
| Met | Thr | Asp | Met | Pro | Pro | Thr | Glu | Glu | Val | Thr | Asp | Ile | Val | Glu | Met |
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<211> 1930

<212> DNA

<213> Homo sapiens

<400> 5897

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<210> 5898

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5898

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| Gln | Thr | Pro | Pro | Val | Glu | Glu | Asn | Val | Thr | Gln | Lys | Ile | Ser | Asp | Leu |
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| Glu | Ile | Cys | Ala | Asp | Glu | Phe | Pro | Gly | Ser | Ser | Ala | Thr | Tyr | Arg | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Glu | Val | Gly | Cys | Gly | Val | Gly | Asn | Thr | Val | Phe | Pro | Ile | Leu | Gln |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Thr | Asn | Asn | Asp | Pro | Gly | Leu | Phe | Val | Tyr | Cys | Cys | Asp | Phe | Ser | Ser |
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| Thr | Ala | Ile | Glu | Leu | Val | Gln | Thr | Asn | Ser | Glu | Tyr | Asp | Pro | Ser | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Cys | Phe | Ala | Phe | Val | His | Asp | Leu | Cys | Asp | Glu | Glu | Lys | Ser | Tyr | Pro |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Val | Pro | Lys | Gly | Ser | Leu | Asp | Ile | Ile | Ile | Leu | Ile | Phe | Val | Leu | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Ile | Val | Pro | Asp | Lys | Met | Gln | Lys | Ala | Ile | Asn | Arg | Leu | Ser | Arg |

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Leu Leu Lys Pro Gly Gly Met Val Leu Leu Arg Asp Tyr Gly Arg Tyr | | |
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| Asp Met Ala Gln Leu Arg Phe Lys Lys Gly Gln Cys Leu Ser Gly Asn | | 160 |
| | 165 | 170 |
| Phe Tyr Val Arg Gly Asp Gly Thr Arg Val Tyr Phe Phe Thr Gln Glu | | 175 |
| | 180 | 185 |
| Glu Leu Asp Thr Leu Phe Thr Thr Ala Gly Leu Glu Lys Val Gln Asn | | 190 |
| | 195 | 200 |
| Leu Val Asp Arg Arg Leu Gln Val Asn Arg Gly Lys Gln Leu Thr Met | | 205 |
| | 210 | 215 |
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<211> 1589

<212> DNA

<213> Homo sapiens

<400> 5899

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<210> 5900

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5900

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| Asp | Thr | Phe | Leu | Glu | Glu | Ile | Asn | Lys | Val | Gly | Lys | Glu | Leu | Gly | Ile |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Ile | Pro | Thr | Ile | Ile | Arg | Asp | Glu | Glu | Leu | Lys | Thr | Arg | Gly | Phe | Gly |
| | | 35 | | | | | | 40 | | | | | 45 | | |
| Gly | Ile | Tyr | Gly | Val | Gly | Lys | Ala | Ala | Leu | His | Pro | Pro | Ala | Leu | Ala |
| | | 50 | | | | | 55 | | | | 60 | | | | |
| Val | Leu | Ser | His | Thr | Pro | Asp | Gly | Ala | Thr | Gln | Thr | Ile | Ala | Trp | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gly | Lys | Gly | Ile | Val | Tyr | Asp | Thr | Gly | Gly | Leu | Ser | Ile | Lys | Gly | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Thr | Met | Pro | Gly | Met | Lys | Arg | Asp | Cys | Gly | Gly | Ala | Ala | Ala | Val |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Leu | Gly | Ala | Phe | Arg | Ala | Ala | Ile | Lys | Gln | Gly | Phe | Lys | Asp | Asn | Leu |
| | | 115 | | | | | | 120 | | | | | 125 | | |
| His | Ala | Val | Phe | Cys | Leu | Ala | Glu | Asn | Ser | Val | Gly | Pro | Asn | Ala | Thr |
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| Arg | Pro | Asp | Asp | Ile | His | Leu | Leu | Tyr | Ser | Gly | Lys | Thr | Val | Glu | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asn | Asn | Thr | Asp | Ala | Glu | Gly | Arg | Leu | Val | Leu | Ala | Asp | Gly | Val | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Tyr | Ala | Cys | Lys | Asp | Leu | Gly | Ala | Asp | Ile | Ile | Leu | Asp | Met | Ala | Thr |
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| Leu | Thr | Gly | Ala | Gln | Gly | Ile | Ala | Thr | Gly | Lys | Tyr | His | Ala | Ala | Val |

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Phe Ser Glu Phe Thr Ser Ala Val Ala Asp Met Lys Asn Ser Val Ala
      245              250              255
Asp Arg Asp Asn Ser Pro Ser Ser Cys Ala Gly Leu Phe Ile Ala Ser
      260              265              270
His Ile Gly Phe Asp Trp Pro Gly Val Trp Val His Leu Asp Ile Ala
      275              280              285
Ala Pro Val His Ala Gly Glu Arg Ala Thr Gly Phe Gly Val Ala Leu
      290              295              300
Leu Leu Ala Leu Phe Gly Arg Ala Ser Glu Asp Pro Leu Leu Asn Leu
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<210> 5901

<211> 984

<212> DNA

<213> Homo sapiens

<400> 5901

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840

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<210> 5902

<211> 328

<212> PRT

<213> Homo sapiens

<400> 5902

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Pro | Arg | Phe | Arg | Ala | Thr | Ile | Asp | Glu | Val | Glu | Thr | Asp | Val | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ile | Glu | Ala | Lys | Leu | Asp | Lys | Leu | Val | Lys | Leu | Cys | Ser | Gly | Met |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Glu | Ala | Gly | Lys | Ala | Tyr | Val | Ser | Thr | Ser | Arg | Leu | Phe | Val | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Val | Arg | Asp | Leu | Ser | Gln | Gln | Cys | Gln | Gly | Asp | Thr | Val | Ile | Ser |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Glu | Cys | Leu | Gln | Arg | Phe | Ala | Asp | Ser | Leu | Gln | Glu | Val | Val | Asn | Tyr |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| His | Met | Ile | Leu | Phe | Asp | Gln | Ala | Gln | Arg | Ser | Val | Arg | Gln | Gln | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Ser | Phe | Val | Lys | Glu | Asp | Val | Arg | Lys | Phe | Lys | Glu | Thr | Lys | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Phe | Asp | Lys | Val | Arg | Glu | Asp | Leu | Glu | Leu | Ser | Leu | Val | Arg | Asn |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Ala | Gln | Ala | Pro | Arg | His | Arg | Pro | His | Glu | Val | Glu | Glu | Ala | Thr | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Leu | Thr | Leu | Thr | Arg | Lys | Cys | Phe | Arg | His | Leu | Ala | Leu | Asp | Tyr |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Val | Leu | Gln | Ile | Asn | Val | Leu | Gln | Ala | Lys | Lys | Lys | Phe | Glu | Ile | Leu |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Asp | Ser | Met | Leu | Ser | Phe | Met | His | Ala | Gln | Ser | Ser | Phe | Phe | Gln | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Tyr | Ser | Leu | Leu | His | Gln | Leu | Asp | Pro | Tyr | Met | Lys | Lys | Leu | Ala |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Glu | Leu | Asp | Gln | Leu | Val | Ile | Asp | Ser | Ala | Val | Glu | Lys | Arg | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Met | Glu | Arg | Lys | His | Ala | Ala | Ile | Gln | Gln | Arg | Thr | Leu | Arg | Asp | Phe |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Tyr | Asp | Glu | Ser | Lys | Val | Glu | Phe | Asp | Val | Asp | Ala | Pro | Ser | Gly |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Val | Val | Met | Glu | Gly | Tyr | Leu | Phe | Lys | Arg | Ala | Ser | Asn | Xaa | Phe | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Thr | Trp | Asn | Arg | Arg | Trp | Phe | Ser | Ile | Gln | Asn | Ser | Gln | Leu | Val | Tyr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gln | Lys | Lys | Leu | Lys | Asp | Ala | Leu | Thr | Val | Val | Val | Asp | Asp | Leu | Arg |
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325

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<212> PRT

<213> Homo sapiens

<400> 5904

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| | | | 20 | | | | | 25 | | | | | 30 | | |
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| Leu | Gln | Lys | Ser | Glu | Ala | Met | Leu | Arg | Lys | His | Val | Glu | Phe | Arg | Lys |
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| Gln | Gln | Tyr | Leu | Ser | Gly | Gly | Met | Cys | Gly | Tyr | Asp | Leu | Asp | Gly | Cys |
| | | | 85 | | | | | | 90 | | | | 95 | | |
| Pro | Val | Trp | Tyr | Asp | Ile | Ile | Gly | Pro | Leu | Asp | Ala | Lys | Gly | Leu | Leu |
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| Ile | Leu | Glu | Ala | Asn | Tyr | Pro | Glu | Thr | Leu | Lys | Asn | Leu | Ile | Val | Ile |
| | 180 | | 185 | | 190 | | | | | | | | | | |
| Arg | Ala | Pro | Lys | Leu | Phe | Pro | Met | Ala | Phe | Asn | Leu | Val | Lys | Ser | Phe |
| | 195 | | 200 | | 205 | | | | | | | | | | |
| Met | Ser | Glu | Asp | Thr | Arg | Lys | Lys | Ile | Met | Val | Leu | Gly | Ala | Asn | Trp |
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| Lys | Glu | Val | Leu | Leu | Lys | His | Ile | Ser | Pro | Asp | Gln | Val | Pro | Val | Glu |
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| Tyr | Gly | Gly | Thr | Met | Thr | Asp | Pro | Asp | Gly | Asn | Pro | Lys | Cys | Lys | Ser |
| | 245 | | 250 | | 255 | | | | | | | | | | |
| Lys | Ile | Asn | Tyr | Gly | Gly | Asp | Ile | Pro | Arg | Lys | Tyr | Tyr | Val | Arg | Asp |
| | 260 | | 265 | | 270 | | | | | | | | | | |
| Gln | Val | Lys | Gln | Gln | Tyr | Glu | His | Ser | Val | Gln | Ile | Ser | Arg | Gly | Ser |
| | 275 | | 280 | | 285 | | | | | | | | | | |
| Ser | Gln | Gln | Val | Glu | Tyr | Glu | Ile | Leu | Phe | Pro | Gly | Cys | Val | Leu | Arg |
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<211> 2280

<212> DNA

<213> Homo sapiens

<400> 5905

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<213> Homo sapiens

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 Gly Leu Val Leu Glu Trp Ile Lys Asn Asn Gly Gly Ala Ala Ala Met
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 Glu Lys Leu Ser Ser Ile Lys Ser Leu Thr Ile Tyr Glu Ile Ile Asp
 115 120 125
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 Leu Lys Gly His Arg Ser Val Gly Gly Ile Arg Ala Ser Leu Tyr Asn
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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 5908

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Pro Asp Ser Arg Ala Leu His Tyr Met Lys Lys Leu Tyr Lys Thr Tyr
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Ala Pro Tyr Ser Phe Thr Phe Asn Ser Gln Phe Glu Phe Gly Lys Lys
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| Glu Pro Asp Gly Ser Ile Ala Tyr | Lys Glu Tyr Glu Asp Met Ile Ala | | | | |
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<212> DNA

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<211> 899
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 35 40 45
 Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
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 Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
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 Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
 115 120 125
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 His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln
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 Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn
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 Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr
 225 230 235 240
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 245 250 255
 Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu
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 275 280 285
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 Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro
 305 310 315 320
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 325 330 335
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 340 345 350
 Met Ser Val Ser Thr Gly Ser Gln Ser Ser Ser Val Asn Ser Met Gln
 355 360 365
 Glu Val Met Asp Glu Ser Ser Ser Glu Leu Val Met Met His Asp Asp
 370 375 380
 Glu Ser Thr Ile Asn Ser Ser Ser Ser Val Val His Lys Lys Asp His

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 385 | | | | | 390 | | | | | 395 | | | | 400 |
| Val | Phe | Ile | Arg | Asp | Glu | Ala | Gly | His | Gly | Asp | Pro | Arg | Pro | Glu |
| | | | | 405 | | | | | 410 | | | | | 415 |
| Arg | Pro | Thr | Gln | Ser | Val | Gln | Ser | Gln | Ala | Leu | His | Tyr | Arg | Asn |
| | | | 420 | | | | | 425 | | | | | 430 | |
| Glu | Arg | Phe | Ala | Thr | Ile | Lys | Ser | Ala | Ser | Leu | Val | Thr | Arg | Gln |
| | | 435 | | | | | 440 | | | | | 445 | | |
| His | Glu | His | Glu | Gln | Glu | Asn | Glu | Leu | Arg | Glu | Gln | Met | Ser | Gly |
| | 450 | | | | | 455 | | | | 460 | | | | |
| Lys | Arg | Met | Arg | Arg | Gln | His | Gln | Lys | Gln | Leu | Ile | Ala | Leu | Glu |
| 465 | | | | | 470 | | | | 475 | | | | | 480 |
| Lys | Leu | Lys | Ala | Glu | Met | Asp | Glu | His | Arg | Leu | Lys | Leu | Gln | Lys |
| | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Glu | Thr | His | Ala | Asn | Asn | Ser | Ser | Ile | Glu | Leu | Glu | Lys | Leu |
| | | | 500 | | | | | 505 | | | | | 510 | |
| Lys | Lys | Gln | Val | Ala | Ile | Ile | Glu | Lys | Glu | Ala | Lys | Val | Ala | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | |
| Asp | Glu | Lys | Lys | Phe | Gln | Gln | Gln | Ile | Leu | Ala | Gln | Gln | Lys | Lys |
| | 530 | | | | | 535 | | | | | 540 | | | |
| Leu | Thr | Thr | Phe | Leu | Glu | Ser | Gln | Lys | Lys | Gln | Tyr | Lys | Ile | Cys |
| 545 | | | | | 550 | | | | 555 | | | | | 560 |
| Glu | Lys | Ile | Lys | Glu | Glu | Met | Asn | Glu | Asp | His | Ser | Thr | Pro | Lys |
| | | | 565 | | | | | 570 | | | | | 575 | |
| Glu | Lys | Gln | Glu | Arg | Ile | Phe | Lys | His | Lys | Glu | Asn | Leu | Gln | His |
| | | 580 | | | | | 585 | | | | | | 590 | |
| Gln | Ala | Glu | Glu | Ala | His | Leu | Leu | Thr | Ser | Thr | Gly | Asp | Trp | Thr |
| | | 595 | | | | 600 | | | | | 605 | | | |
| Thr | Thr | Lys | Asn | Cys | Arg | Phe | Phe | Lys | Arg | Lys | Ile | Met | Ile | Lys |
| | 610 | | | | | 615 | | | | | 620 | | | |
| His | Glu | Val | Glu | Gln | Gln | Asn | Ile | Arg | Glu | Glu | Leu | Asn | Lys | Lys |
| 625 | | | | | 630 | | | | | 635 | | | | 640 |
| Thr | Met | Lys | Glu | Met | Glu | His | Ala | Met | Leu | Ile | Arg | His | Asp | Glu |
| | | | 645 | | | | | | 650 | | | | 655 | |
| Thr | Arg | Glu | Leu | Glu | Tyr | Arg | Gln | Leu | His | Thr | Leu | Gln | Lys | Leu |
| | | 660 | | | | | | 665 | | | | | 670 | |
| Met | Asp | Leu | Ile | Arg | Leu | Gln | His | Gln | Thr | Glu | Leu | Glu | Asn | Gln |
| | 675 | | | | | | 680 | | | | | 685 | | |
| Glu | Tyr | Asn | Lys | Arg | Arg | Glu | Arg | Glu | Leu | His | Arg | Lys | His | Val |
| | 690 | | | | | 695 | | | | | 700 | | | |
| Glu | Leu | Arg | Gln | Gln | Pro | Lys | Asn | Leu | Lys | Ala | Met | Glu | Met | Gln |
| 705 | | | | | 710 | | | | | 715 | | | | 720 |
| Lys | Lys | Gln | Phe | Gln | Asp | Thr | Cys | Lys | Val | Gln | Thr | Lys | Gln | Tyr |
| | | | 725 | | | | | | 730 | | | | 735 | |
| Ala | Leu | Lys | Asn | His | Gln | Leu | Glu | Val | Thr | Pro | Lys | Asn | Glu | His |
| | | 740 | | | | | 745 | | | | | 750 | | |
| Thr | Ile | Leu | Lys | Thr | Leu | Lys | Asp | Glu | Gln | Thr | Arg | Lys | Leu | Ala |
| | 755 | | | | | 760 | | | | | 765 | | | |
| Leu | Ala | Glu | Gln | Tyr | Glu | Gln | Ser | Ile | Asn | Glu | Met | Met | Ala | Ser |
| | 770 | | | | | 775 | | | | 780 | | | | |
| Ala | Leu | Arg | Leu | Asp | Glu | Ala | Gln | Glu | Ala | Glu | Cys | Gln | Ala | Leu |
| 785 | | | | | 790 | | | | 795 | | | | | 800 |
| Leu | Gln | Leu | Gln | Gln | Glu | Met | Glu | Leu | Leu | Asn | Ala | Tyr | Gln | Ser |
| | | | 805 | | | | | 810 | | | | | 815 | |
| Ile | Lys | Met | Gln | Thr | Glu | Ala | Gln | His | Glu | Arg | Glu | Leu | Gln | Lys |

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 835 840 845
 Glu Glu Leu Ala Ala Leu Gln Lys Glu Arg Ser Glu Arg Ile Lys Asn
 850 855 860
 Leu Leu Glu Arg Gln Glu Arg Glu Ile Glu Thr Phe Asp Met Glu Ser
 865 870 875 880
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 <211> 645
 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

<400> 5912
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 35 40 45
 Ala Ser Ser Ser Ser Leu Leu Asn Arg Leu Gln Leu Asp Asp Asp Ile

50 55 60
 Asp Gly Glu Thr Arg Asp Leu Phe Val Ile Val Asp Asp Pro Lys Lys
 65 70 75 80
 His Val Cys Thr Met Glu Thr Tyr Ile Thr Tyr Arg Ile Thr Thr Lys
 85 90 95
 Ser Thr Arg Val Glu Phe Asp Leu Pro Glu Tyr Ser Val Arg Arg Arg
 100 105 110
 Tyr Gln Asp Phe Asp Trp Leu Arg Ser Lys Leu Glu Glu Ser Gln Pro
 115 120 125
 Thr His Leu Ile Pro Pro Leu Pro Glu Lys Phe Val Val Lys Gly Val
 130 135 140
 Val Asp Arg Phe Ser Glu Glu Phe Val Glu Thr Arg Arg Lys Ala Leu
 145 150 155 160
 Asp Lys Phe Leu Lys Arg Ile Thr Asp His Pro Val Leu Ser Phe Asn
 165 170 175
 Glu His Phe Asn Ile Phe Leu Thr Ala Lys Asp Leu Asn Ala Tyr Lys
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<210> 5913

<211> 2495

<212> DNA

<213> Homo sapiens

<400> 5913

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 <212> PRT
 <213> Homo sapiens

<400> 5914
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 35 40 45
 Gly Gln Gly Phe Asp Arg His Leu Phe Ala Leu Arg His Leu Ala Ala
 50 55 60
 Ala Xaa Gly Ile Ile Leu Pro Glu Leu Tyr Leu Asp Pro Ala Tyr Gly
 65 70 75 80
 Gln Ile Asn His Asn Val Leu Ser Thr Ser Thr Leu Ser Ser Pro Ala
 85 90 95
 Val Asn Xaa Cys Arg Phe Ala Pro Val Val Ser Asp Ala Phe Gly Val
 100 105 110
 Gly Tyr Ala Val His Asp Asn Trp Ile Gly Cys Asn Val Ser Ser Tyr
 115 120 125
 Pro Gly Arg Asn Ala Arg Glu Phe Leu Gln Cys Val Glu Lys Ala Xaa
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 <213> Homo sapiens

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 360
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<210> 5916
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 <212> PRT
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 35 40 45
 Ser Cys Glu Ile Ala Val Thr Arg Lys Val Val Gln Val Tyr Arg Lys
 50 55 60
 Trp Ile Leu Gln Asp Lys Pro Val Phe Met Glu Glu Pro Asp Arg Lys
 65 70 75 80
 Asp Val Ala Gln Glu Asp Ala Glu Lys Leu Gly Phe Ser Glu Thr Asp
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 Ser Lys Glu Ala Ser Ser Glu Ser Ser Gly His Lys Arg Ser Ser Ser
 100 105 110
 Trp Gly Arg Thr Tyr Ser Phe Thr Ser Ala Met Ser Arg Gly Cys Val
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<213> Homo sapiens

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| | | | 165 | | | | | | 170 | | | | | 175 | |
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 1680
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<210> 5928

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5928

Met Leu Glu Leu Pro Thr Ile Tyr Arg Lys Val Tyr Asp Gln Pro Phe

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| His Ser Ser Ala Leu Glu Lys Glu Glu Ala Leu Ser Asn Pro Gly Ala | | | |
| 20 | 25 | 30 | |
| Leu Asp Leu Pro Ser Leu Thr Ser Leu Leu Ser Glu Lys Ala Lys Glu | | | |
| 35 | 40 | 45 | |
| Phe Leu Met Glu Asn Arg Val Gln Ser Phe Tyr Gln Gln Glu Leu Glu | | | |
| 50 | 55 | 60 | |
| Met Val Glu Ser Leu Leu Ser Leu Ala Asn Gln Pro Val Ile His Ser | | | |
| 65 | 70 | 75 | 80 |
| Ala Cys Ser Asp Gln Val Asn Phe Lys Lys Asp Thr Thr Ser Lys Ala | | | |
| 85 | 90 | 95 | |
| Ile His Ser Ile Phe Lys Asn Ala Ile Gln Leu Leu Gln Glu Lys Gly | | | |
| 100 | 105 | 110 | |
| Leu Val Phe Gln Lys Asp Asp Gly Phe Asp Asn Leu Tyr Tyr Val Thr | | | |
| 115 | 120 | 125 | |
| Arg Glu Asp Lys Asp Leu His Arg Lys Ile His Arg Ile Ile Gln Gln | | | |
| 130 | 135 | 140 | |
| Asp Cys Gln Lys Pro Asn His Met Glu Lys Gly Cys His Phe Leu His | | | |
| 145 | 150 | 155 | 160 |
| Ile Leu Ala Cys Ala Arg Leu Ser Ile Arg Pro Gly Leu Ser Glu Ala | | | |
| 165 | 170 | 175 | |
| Val Leu Gln Gln Val Leu Glu Leu Leu Glu Asp Gln Ser Asp Ile Val | | | |
| 180 | 185 | 190 | |
| Ser Thr Met Glu His Tyr Tyr Thr Ala Phe | | | |
| 195 | 200 | | |

<210> 5929

<211> 606

<212> DNA

<213> Homo sapiens

<400> 5929

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240
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300
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360
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480
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606

<210> 5930
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 5930
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 Lys Glu Pro Leu Gly Arg Ala Glu Arg Pro Gly Arg Pro Cys Thr Arg
 35 40 45
 Leu Gln Pro Ala Gly Ser Val Ser Ser Thr Pro Leu Ser Thr Pro Cys
 50 55 60
 Ser Ser Val Pro Ser Ser Pro Ser Phe Ser Pro Thr Glu Gln Lys Thr
 65 70 75 80
 His Leu Glu Asp Leu Tyr Trp Met Ala Ser Asn Tyr Gln Gln Met Asn
 85 90 95
 Pro Glu Ala Leu Asn Leu Thr Pro Glu Asp Ala Val Glu Ala Leu Ile
 100 105 110
 Gly Ser His Pro Val Pro Gln Pro Leu Gln Ser Phe Asp Ser Phe Arg
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 Gly Ala His His His His His His His Pro His Pro His His Ala
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<210> 5931
 <211> 478
 <212> DNA
 <213> Homo sapiens

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 120
 aggtcctctaa acaggtaccg ccaggctgga agcagtgggc cagggaattc tcagaacagc
 180
 tttctagtgc aagaggtgat ggaagaagag tggaatgctt tgcagtcagt ggagaattgt
 240
 ccagaagact tggctcagct ggaggagctg atagacatgg ctgtgctgga ggaaattcaa
 300
 caggagctga tcaaccaagg tacaacctga gaatcacaag cgggtgtggtg gtgtgtcagt
 360
 gtggcctgtc catcccatct cattcttctg agttgacaga gcagaagctt cgtgcctgtt
 420
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 478

<210> 5932
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5932

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 20 25 30
 Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln
 35 40 45
 Ala Gly Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln
 50 55 60
 Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys
 65 70 75 80
 Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu
 85 90 95
 Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Gly Thr Thr
 100 105

<210> 5933

<211> 1953

<212> DNA

<213> Homo sapiens

<400> 5933

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 300
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 420
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 480
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 660
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 720
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 840
 caaggcctgg tgcggcagga cgcagagccc atgttctggg agatcatgag gttgcggaag
 900
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 960

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 1080
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 1680
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 1740
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 1920
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 1953

<210> 5934

<211> 314

<212> PRT

<213> Homo sapiens

<400> 5934

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ile | Arg | Glu | Lys | Gly | Ser | Glu | Phe | Leu | Lys | Glu | Glu | Leu | His |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Arg | Ala | Gln | Lys | Glu | Leu | Lys | Leu | Lys | Asp | Glu | Glu | Cys | Glu | Arg | Leu |
| | | 20 | | | | | 25 | | | | 30 | | | | |
| Ser | Lys | Val | Arg | Glu | Gln | Leu | Glu | Gln | Glu | Leu | Glu | Glu | Leu | Thr | Ala |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Ser | Leu | Phe | Glu | Glu | Ala | His | Lys | Met | Val | Arg | Glu | Ala | Asn | Met | Lys |
| | | 50 | | | | 55 | | | | 60 | | | | | |
| Gln | Ala | Ala | Ser | Glu | Lys | Gln | Leu | Lys | Glu | Ala | Arg | Gly | Lys | Ile | Asp |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Met | Leu | Gln | Ala | Glu | Val | Thr | Ala | Leu | Lys | Thr | Leu | Val | Ile | Thr | Ser |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Thr | Pro | Ala | Ser | Pro | Asn | Arg | Glu | Leu | His | Pro | Gln | Leu | Leu | Ser | Pro |

| | | |
|---|-----|-----|
| 100 | 105 | 110 |
| Thr Lys Ala Gly Pro Arg Lys Gly His Ser Arg His Lys Ser Thr Ser | | |
| 115 | 120 | 125 |
| Ser Thr Leu Cys Pro Ala Val Cys Pro Ala Ala Gly His Thr Leu Thr | | |
| 130 | 135 | 140 |
| Pro Asp Arg Glu Gly Lys Glu Val Asp Thr Ile Leu Phe Ala Glu Phe | | |
| 145 | 150 | 155 |
| Gln Ala Trp Arg Glu Ser Pro Thr Leu Asp Lys Thr Cys Pro Phe Leu | | |
| 165 | 170 | 175 |
| Glu Arg Val Tyr Arg Glu Asp Val Gly Pro Cys Leu Asp Phe Thr Met | | |
| 180 | 185 | 190 |
| Gln Glu Leu Ser Val Leu Val Arg Ala Ala Val Glu Asp Asn Thr Leu | | |
| 195 | 200 | 205 |
| Thr Ile Glu Pro Val Ala Ser Gln Thr Leu Pro Thr Val Lys Val Ala | | |
| 210 | 215 | 220 |
| Glu Val Asp Cys Ser Ser Thr Asn Thr Cys Ala Leu Ser Gly Leu Thr | | |
| 225 | 230 | 235 |
| Arg Thr Cys Arg His Arg Ile Arg Leu Gly Asp Ser Lys Ser His Tyr | | |
| 245 | 250 | 255 |
| Tyr Ile Ser Pro Ser Ser Arg Ala Arg Ile Thr Ala Val Cys Asn Phe | | |
| 260 | 265 | 270 |
| Phe Thr Tyr Ile Arg Tyr Ile Gln Gln Gly Leu Val Arg Gln Asp Ala | | |
| 275 | 280 | 285 |
| Glu Pro Met Phe Trp Glu Ile Met Arg Leu Arg Lys Glu Met Ser Leu | | |
| 290 | 295 | 300 |
| Ala Lys Leu Gly Phe Phe Pro Gln Glu Ala | | |
| 305 | 310 | |

<210> 5935

<211> 2727

<212> DNA

<213> Homo sapiens

<400> 5935

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120
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180
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240
ccgccatata aggaacaagt tccagttcca gtctaccacc caacacctag ccagactcgg
300
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360
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420
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660
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720
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780
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840
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1140
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1980
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2160
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 2460
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 2580
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 2727

<210> 5936

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5936

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| Met | Gly | Asn | Cys | Leu | Lys | Ser | Pro | Thr | Ser | Asp | Asp | Ile | Ser | Leu | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Glu | Ser | Gln | Ser | Asp | Arg | Ala | Ser | Phe | Gly | Glu | Gly | Thr | Glu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Gln | Glu | Pro | Pro | Pro | Pro | Tyr | Gln | Glu | Gln | Val | Pro | Val | Pro | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Tyr | His | Pro | Thr | Pro | Ser | Gln | Thr | Arg | Leu | Ala | Thr | Gln | Leu | Thr | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Gln | Ile | Arg | Ile | Ala | Gln | Arg | Ile | Gly | Leu | Ile | Gln | His | Leu |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Pro | Lys | Gly | Val | Tyr | Asp | Pro | Gly | Arg | Asp | Gly | Ser | Glu | Lys | Lys | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Glu | Cys | Val | Ile | Cys | Met | Met | Asp | Phe | Val | Tyr | Gly | Asp | Pro | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Phe | Leu | Pro | Cys | Met | His | Ile | Tyr | His | Leu | Asp | Cys | Ile | Asp | Asp |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Trp | Leu | Met | Arg | Ser | Phe | Thr | Cys | Pro | Ser | Cys | Met | Glu | Pro | Val | Asp |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Ala | Ala | Leu | Leu | Ser | Ser | Tyr | Glu | Thr | Asn | | | | | | |
| 145 | | | | | | 150 | | | | | | | | | |

<210> 5937

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 5937

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420
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660
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720
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1380
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1536

<210> 5938

<211> 406

<212> PRT

<213> Homo sapiens

<400> 5938

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 Gly Lys Ser Leu Ile Val Pro Phe Lys Gly Ser Arg Val Ile Asp Ser
 35 40 45
 Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val Gln Leu Met
 50 55 60
 Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys Val Ala Leu Phe
 65 70 75 80
 Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr Gly Glu Gly Thr Val
 85 90 95
 Val Val Ser Tyr Gly Val Ser Leu Glu Asn Ala Val Leu Asp Gln Leu
 100 105 110
 Leu Asn Leu Gly Arg Gln Leu Ile Ser Asp His Val Asp Leu Val Leu
 115 120 125
 Cys Gln Lys Val Ile His Pro Ser Leu Lys Gln Phe Leu Asn Met His
 130 135 140
 Arg Ile Ile Ala Ile Asp Arg Ile Gly Val Thr Leu Met Glu Pro Leu
 145 150 155 160
 Thr Lys Met Thr Gly Thr Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys
 165 170 175
 Pro Asn Ser Tyr Gly Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly
 180 185 190
 Ser Lys His Phe Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser
 195 200 205
 Leu Leu Leu Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu
 210 215 220
 Thr Cys Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro
 225 230 235 240
 Trp Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
 245 250 255
 Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp Asp
 260 265 270
 Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe Cys Ser
 275 280 285
 Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly Gly Glu Ile
 290 295 300
 Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val Gln Ala Asp Ser
 305 310 315 320
 Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser Gln Cys Gly Cys Gly
 325 330 335
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<210> 5939

<211> 795

<212> DNA

<213> Homo sapiens

<400> 5939

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| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Gln | Ser | Leu | Ala | Leu | Leu | Xaa | Gln | Val | Gly | Val | Gln | Trp | His | Asp |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Pro | Gly | Ser | Leu | Gln | Pro | Pro | Pro | Pro | Gly | Phe | Lys | Gln | Phe | Ser | Cys |

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 Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Gly Glu Lys Ile Gln
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 Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu Glu Leu
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<210> 5950

<211> 397

<212> PRT

<213> Homo sapiens

<400> 5950

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Thr | Phe | Phe | Lys | Asp | Gly | Tyr | Glu | Gln | Leu | Arg | Gln | Leu | Ser | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Ala | Met | Lys | Gly | Val | Ile | Arg | Val | Lys | Phe | Val | Asn | Asp | Leu | Gly |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Val | Asp | Glu | Ala | Gly | Ile | Asp | Gln | Asp | Gly | Val | Phe | Lys | Glu | Phe | Leu |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Ile | Ile | Lys | Arg | Val | Phe | Asp | Pro | Ala | Leu | Asn | Leu | Phe | Lys |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Thr | Thr | Ser | Gly | Asp | Glu | Arg | Leu | Tyr | Pro | Ser | Pro | Thr | Ser | Tyr | Ile |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| His | Glu | Asn | Tyr | Leu | Gln | Leu | Phe | Glu | Phe | Val | Gly | Lys | Met | Leu | Gly |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Lys | Ala | Val | Tyr | Glu | Gly | Ile | Val | Val | Asp | Val | Pro | Phe | Ala | Ser | Phe |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Phe | Leu | Ser | Gln | Leu | Leu | Gly | His | His | His | Ser | Val | Phe | Tyr | Ser | Ser |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Val | Asp | Glu | Leu | Pro | Ser | Leu | Asp | Ser | Glu | Phe | Tyr | Lys | Asn | Leu | Thr |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Ile | Lys | Arg | Tyr | Asp | Gly | Asp | Ile | Thr | Asp | Leu | Gly | Leu | Thr | Leu |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Tyr | Asp | Glu | Asp | Val | Met | Gly | Gln | Leu | Val | Cys | His | Glu | Leu | Ile |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Pro | Gly | Gly | Lys | Thr | Ile | Pro | Val | Thr | Asn | Glu | Asn | Lys | Ile | Ser | Tyr |
| | | 195 | | | | 200 | | | | | | 205 | | | |
| Ile | His | Leu | Met | Ala | His | Phe | Arg | Met | His | Thr | Gln | Ile | Lys | Asn | Gln |

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Ile Arg Met Phe Ser Thr Pro Glu Leu Gln Arg Leu Ile Ser Gly Asp
      245              250              255
Asn Ala Glu Ile Asp Leu Glu Asp Leu Lys Lys His Thr Val Tyr Tyr
      260              265              270
Gly Gly Phe His Gly Ser His Arg Val Ile Ile Trp Leu Trp Asp Ile
      275              280              285
Leu Ala Ser Asp Phe Thr Pro Asp Glu Arg Ala Met Phe Leu Lys Phe
      290              295              300
Val Thr Ser Cys Ser Arg Pro Pro Leu Leu Gly Phe Ala Tyr Leu Lys
305              310              315              320
Pro Pro Phe Ser Ile Arg Cys Val Glu Val Ser Asp Asp Gln Asp Thr
      325              330              335
Gly Asp Thr Leu Gly Ser Val Leu Arg Gly Phe Phe Thr Ile Arg Lys
      340              345              350
Arg Glu Pro Gly Gly Arg Leu Pro Thr Ser Ser Thr Cys Phe Asn Leu
      355              360              365
Leu Lys Leu Pro Asn Tyr Ser Lys Lys Ser Val Leu Arg Glu Lys Leu
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<210> 5951

<211> 1724

<212> DNA

<213> Homo sapiens

<400> 5951

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660
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720

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 960
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<210> 5952

<211> 378

<212> PRT

<213> Homo sapiens

<400> 5952

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Arg | Pro | Ala | Leu | Arg | Leu | Gly | Ser | Ser | Leu | Ala | Gly | Leu | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Pro | Arg | Phe | Pro | Pro | Gly | Gly | Phe | Ala | Ala | Gly | Arg | Thr | Met | Leu |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Lys | Glu | Tyr | Arg | Ile | Cys | Met | Pro | Leu | Thr | Val | Asp | Glu | Tyr | Lys |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ile | Gly | Gln | Leu | Tyr | Met | Ile | Ser | Lys | His | Ser | His | Glu | Gln | Ser | Asp |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Arg | Gly | Glu | Gly | Val | Glu | Val | Val | Gln | Asn | Glu | Pro | Phe | Glu | Asp | Pro |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| His | His | Gly | Asn | Gly | Gln | Phe | Thr | Glu | Lys | Arg | Val | Tyr | Leu | Asn | Ser |

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 Cys Ser Phe Leu Pro Lys Phe Ser Ile His Ile Glu Thr Lys Tyr Glu
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 Asp Asn Lys Gly Ser Asn Asp Thr Ile Phe Asp Asn Glu Ala Lys Asp
 165 170 175
 Val Glu Arg Glu Val Cys Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro
 180 185 190
 Glu Arg Tyr Tyr Lys Glu Ser Glu Asp Pro Lys His Phe Lys Ser Glu
 195 200 205
 Lys Thr Gly Arg Gly Gln Leu Arg Glu Gly Trp Arg Asp Ser His Gln
 210 215 220
 Pro Ile Met Cys Ser Tyr Lys Leu Val Thr Val Lys Phe Glu Val Trp
 225 230 235 240
 Gly Leu Gln Thr Arg Val Glu Gln Phe Val His Lys Val Val Arg Asp
 245 250 255
 Ile Leu Leu Ile Gly His Arg Gln Ala Phe Ala Trp Val Asp Glu Trp
 260 265 270
 Tyr Asp Met Thr Met Asp Glu Val Arg Glu Phe Glu Arg Ala Thr Gln
 275 280 285
 Glu Ala Thr Asn Lys Lys Ile Gly Ile Phe Pro Pro Ala Ile Ser Ile
 290 295 300
 Ser Ser Ile Pro Leu Leu Pro Ser Ser Val Arg Ser Ala Pro Ser Ser
 305 310 315 320
 Ala Pro Ser Thr Pro Leu Ser Thr Asp Ala Pro Glu Phe Leu Ser Val
 325 330 335
 Pro Lys Asp Arg Pro Arg Lys Lys Ser Ala Pro Glu Thr Leu Thr Leu
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<210> 5953

<211> 777

<212> DNA

<213> Homo sapiens

<400> 5953

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 360

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 660
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<210> 5954

<211> 152

<212> PRT

<213> Homo sapiens

<400> 5954

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| 1 | | | 5 | | | | | 10 | | | | | | 15 | |
| Tyr | Lys | Leu | Val | Gly | Ser | Pro | Pro | Trp | Lys | Glu | Ala | Phe | Arg | Gln | Arg |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Cys | Leu | Glu | Arg | Met | Arg | Asn | Ser | Arg | Asp | Arg | Leu | Leu | Asn | Arg | Tyr |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Arg | Gln | Leu | Xaa | Ser | Ser | Gly | Pro | Gly | Asn | Ser | Gln | Asn | Ser | Phe | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Gln | Glu | Val | Met | Glu | Glu | Glu | Trp | Asn | Ala | Leu | Gln | Ser | Val | Glu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Asn | Cys | Pro | Glu | Asp | Leu | Ala | Gln | Leu | Glu | Glu | Leu | Ile | Asp | Met | Ala |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Val | Leu | Glu | Glu | Ile | Gln | Gln | Glu | Leu | Ile | Asn | Gln | Glu | Gln | Ser | Ile |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Ile | Ser | Glu | Tyr | Glu | Lys | Ser | Leu | Gln | Phe | Asp | Glu | Lys | Cys | Leu | Ser |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Ile | Met | Leu | Ala | Glu | Trp | Glu | Ala | Asn | Pro | Leu | Ile | Cys | Pro | Val | Cys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Lys | Pro | Val | Ile | Leu | Gly | Leu | | | | | | | | |
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<210> 5955

<211> 1459

<212> DNA

<213> Homo sapiens

<400> 5955

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 240
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<210> 5956

<211> 431

<212> PRT

<213> Homo sapiens

<400> 5956

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| 1 | | | | | 5 | | | | 10 | | | | | 15 | |
| Ala | Pro | Ala | Ser | Arg | Tyr | Pro | Gly | Gly | Leu | Met | Ser | Glu | Phe | Ser | Pro |

| | | |
|---|-----|-----|
| 20 | 25 | 30 |
| Arg Phe Lys Ala Leu Pro Pro Gly Ala Gln Pro Val Ile Cys Ile His | | |
| 35 | 40 | 45 |
| Ser Ala Cys Thr Trp Ala Asp Asp Leu Ser Val Cys Tyr Pro Ser Pro | | |
| 50 | 55 | 60 |
| His Ile Thr Ile His Met His Gly Gly Thr Ser Ser Asp Gly Ser Ser | | |
| 65 | 70 | 75 |
| Ser Met Ala Ala Ile Tyr Gly Gly Val Glu Gly Gly Gly Thr Arg Ser | | |
| 85 | 90 | 95 |
| Glu Val Leu Leu Val Ser Glu Asp Gly Lys Ile Leu Ala Glu Ala Asp | | |
| 100 | 105 | 110 |
| Gly Leu Ser Thr Asn His Trp Leu Ile Gly Thr Asp Lys Cys Val Glu | | |
| 115 | 120 | 125 |
| Arg Ile Asn Glu Met Val Asn Arg Ala Lys Arg Lys Ala Gly Val Asp | | |
| 130 | 135 | 140 |
| Pro Leu Val Pro Leu Arg Ser Leu Gly Leu Ser Leu Ser Gly Gly Asp | | |
| 145 | 150 | 155 |
| Gln Glu Asp Ala Gly Arg Ile Leu Ile Glu Glu Leu Arg Asp Arg Phe | | |
| 165 | 170 | 175 |
| Pro Tyr Leu Ser Glu Ser Tyr Leu Ile Thr Thr Asp Ala Ala Gly Ser | | |
| 180 | 185 | 190 |
| Ile Ala Thr Ala Thr Pro Asp Gly Gly Val Val Leu Ile Ser Gly Thr | | |
| 195 | 200 | 205 |
| Gly Ser Asn Cys Arg Leu Ile Asn Pro Asp Gly Ser Glu Ser Gly Cys | | |
| 210 | 215 | 220 |
| Gly Gly Trp Gly His Met Met Gly Asp Glu Gly Ser Ala Leu Ser Ala | | |
| 225 | 230 | 235 |
| Pro Ser Ala Tyr Trp Ile Ala His Gln Ala Val Lys Ile Val Phe Asp | | |
| 245 | 250 | 255 |
| Ser Ile Asp Asn Leu Glu Ala Ala Pro His Asp Ile Gly Tyr Val Lys | | |
| 260 | 265 | 270 |
| Gln Ala Met Phe His Tyr Phe Gln Val Pro Asp Arg Leu Gly Ile Leu | | |
| 275 | 280 | 285 |
| Thr His Leu Tyr Arg Asp Phe Asp Lys Cys Arg Phe Ala Gly Phe Cys | | |
| 290 | 295 | 300 |
| Arg Lys Ile Ala Glu Gly Ala Gln Gln Gly Asp Pro Leu Ser Arg Tyr | | |
| 305 | 310 | 315 |
| Ile Phe Arg Lys Ala Gly Glu Met Leu Gly Arg His Ile Val Ala Val | | |
| 325 | 330 | 335 |
| Leu Pro Glu Ile Asp Pro Val Leu Phe Gln Gly Lys Ile Gly Leu Pro | | |
| 340 | 345 | 350 |
| Ile Leu Cys Val Gly Ser Val Trp Lys Ser Trp Glu Leu Leu Lys Glu | | |
| 355 | 360 | 365 |
| Gly Phe Leu Leu Ala Leu Thr Gln Gly Arg Glu Ile Gln Ala Gln Asn | | |
| 370 | 375 | 380 |
| Phe Phe Ser Ser Phe Thr Leu Met Lys Leu Arg His Ser Ser Ala Leu | | |
| 385 | 390 | 395 |
| Gly Gly Ala Ser Leu Gly Ala Arg His Ile Gly His Leu Leu Pro Met | | |
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| Asp Tyr Ser Ala Asn Ala Ile Ala Phe Tyr Ser Tyr Thr Phe Ser | | |
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<210> 5957

<211> 855

<212> DNA

<213> Homo sapiens

<400> 5957

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 360
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 420
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 720
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<210> 5958

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5958

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| Met | Ala | Glu | Ser | Leu | Arg | Ser | Pro | Arg | Arg | Ser | Leu | Tyr | Lys | Leu | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ser | Pro | Pro | Trp | Lys | Glu | Ala | Phe | Arg | Gln | Arg | Cys | Leu | Glu | Arg |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Met | Arg | Asn | Ser | Arg | Asp | Arg | Leu | Leu | Asn | Arg | Tyr | Arg | Gln | Ala | Gly |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ser | Ser | Gly | Pro | Gly | Asn | Ser | Gln | Asn | Ser | Phe | Leu | Val | Gln | Glu | Val |
| | | 50 | | | | 55 | | | | 60 | | | | | |
| Met | Glu | Glu | Glu | Trp | Asn | Ala | Leu | Gln | Ser | Val | Glu | Asn | Cys | Pro | Glu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Leu | Ala | Gln | Leu | Glu | Glu | Leu | Ile | Asp | Met | Ala | Val | Leu | Glu | Glu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Ile | Gln | Gln | Glu | Leu | Ile | Asn | Gln | Gly | Leu | | | | | | |

100

105

<210> 5959
 <211> 830
 <212> DNA
 <213> Homo sapiens

<400> 5959
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 120
 ctatatgatg acaatctctt ctgtcatttg gtggatgaag tactcttggt tgaaagggag
 180
 ctacacagtg ttcattggcta tcctggcact tttgctaatt gtatgcatat tctatcagag
 240
 gaaacctgtt ttcaaagatg ggtgacgggg gagagaaaat ttgctcttca aaaaatggac
 300
 tcaatgcttt ctcagaagc tgcttggtta tcgcaatata aggatatcac tgacgtggat
 360
 gaaatgaaag ttccagattg tgcagaaact tttatgactc tactcttggt tataactgac
 420
 aggtataaaa atcttccac agcttccga aagcttcagt tcctggagtt acagaaggac
 480
 ttagtagatg attttaggat acgattaaca caagtgatga aagaagagac tagagcttcc
 540
 cttggctttc gatactgtgc aattcttaat gctgtgaact acatctcaac agtactagca
 600
 gattgggctg acaatgtttt ctttctacaa cttcaacagg ctgcactgga ggtgtttgca
 660
 gagaataata ctctgagtaa attgcagcta ggacagctag cctctatgga gagctctgtc
 720
 tttgatgaca tgattaacct cttagaacgt ttaaagcatg atatgttgac ccgtcaagta
 780
 gaccacgttt ttagagaagt taaagatgct gcaaaattgt ataaaaaaga
 830

<210> 5960
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 5960
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 1 5 10 15
 Tyr Asp Asp Asn Leu Phe Cys His Leu Val Asp Glu Val Leu Leu Phe
 20 25 30
 Glu Arg Glu Leu His Ser Val His Gly Tyr Pro Gly Thr Phe Ala Asn
 35 40 45
 Cys Met His Ile Leu Ser Glu Thr Cys Phe Gln Arg Trp Val Thr
 50 55 60
 Gly Glu Arg Lys Phe Ala Leu Gln Lys Met Asp Ser Met Leu Ser Ser
 65 70 75 80
 Glu Ala Ala Trp Val Ser Gln Tyr Lys Asp Ile Thr Asp Val Asp Glu

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<210> 5962
<211> 114
<212> PRT
<213> Homo sapiens
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<400> 5962

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Met Cys Gly Asp Met Gln Glu Gly Thr Pro Arg Cys Ala Tyr Thr Ala
 1             5             10             15
Leu Leu Pro Pro Gly Pro Thr Leu His Arg Asp Thr Arg Arg Glu Ser
      20             25             30
Leu Ser His Ser His Gln Pro Gly Leu Ser Gly Glu Gly Ala Gln Glu
      35             40             45
Gln Ala Arg Ile Asp Thr Gly Ile His Met Lys Arg Met Gln Thr Pro
      50             55             60
Arg His Pro Ala Leu Ser Gln Ser Leu Ile Lys Phe Gly Ile Leu Phe
65             70             75             80
Asp Pro Ser Ile Phe Phe Leu Glu Thr Gly Ser Arg Phe Ile Ala Gln
      85             90             95
Ala Glu Cys Ser Gly Tyr Ser Gln Ala Pro Leu Glu Arg Thr Ala Ala
      100             105             110
Pro Ser

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<210> 5963

<211> 1288

<212> DNA

<213> Homo sapiens

<400> 5963

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ttgaagataa gaaaggaaat gagagttggt gacaggcaaa taagggatat ccaaagagaa
120
gaagaaaaag tgaacgatc tgtgaaagat gctgccaaga agggccagaa ggatgtctgc
180
atagttcttg ccaaggagat gatcagggtca aggaaggctg tgagcaagct gtatgcatcc
240
aaagcacaca tgaactcagt gctcatgggg atgaagaacc agctcgcggt cttgcgagtg
300
gctggttccc tgcagaagag cacagaagtg atgaaggcca tgcaaagtct tgtgaagatt
360
ccagagattc aggccaccat gagggagttg tccaaagaaa tgatgaaggc tgggatcata
420
gaggagatgt tagaggacac ttttgaaagc atggacgatc aggaagaaat ggaggaagaa
480
gcagaaatgg aaattgacag aattctcttt gaaattacag caggggcctt gggcaaagca
540
cccagtaaag tgactgatgc ccttccagag ccagaacctc caggagcgat ggctgcctca
600
gaggatgagg aggaggagga agaggctctg gaggccatgc agtcccggct ggccacactc
660
cgcagctagg ggctgcctac cccgctgggt gtgcacacac tcctctcaag agctgccatt
720
ttatgtgtct cttgcactac acctctgttg tgaggactac cattttggag aaggttctgt
780
ttgtctcttt tcattctctg cccagggtttt gggatcgcaa agggattggt cttataaaag
840
tggcataaat aaatgcatca ttttaggag tatagacaga tatatcttat tgtggggagg
900

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ggaaagaaat ccatctgctc atgaagcact tctgaaaata taggtgattg cctgaatgtc
 960
 gaagactcta cttttgtcta taaaacacta tataaatgaa ttttaataaa tttttgcttc
 1020
 agcacttggc cccattgtag attgccctgt gcagtaaact ttcaagggtg cagctgcccc
 1080
 agattgcttc atttgctggg tgtggaaaga gttgctatgg ccaggcatat gggatttggg
 1140
 agctcagcag aagtgacttc tgctctgtgg ttgctgctcc ccggctttca cagacatggg
 1200
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 1288

<210> 5964

<211> 222

<212> PRT

<213> Homo sapiens

<400> 5964

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Leu | Phe | Gly | Lys | Thr | Gln | Glu | Lys | Pro | Pro | Lys | Glu | Leu | Val |
| 1 | | | | 5 | | | | | 10 | | | | 15 | | |
| Asn | Glu | Trp | Ser | Leu | Lys | Ile | Arg | Lys | Glu | Met | Arg | Val | Val | Asp | Arg |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Gln | Ile | Arg | Asp | Ile | Gln | Arg | Glu | Glu | Glu | Lys | Val | Lys | Arg | Ser | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Lys | Asp | Ala | Ala | Lys | Lys | Gly | Gln | Lys | Asp | Val | Cys | Ile | Val | Leu | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Glu | Met | Ile | Arg | Ser | Arg | Lys | Ala | Val | Ser | Lys | Leu | Tyr | Ala | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Lys | Ala | His | Met | Asn | Ser | Val | Leu | Met | Gly | Met | Lys | Asn | Gln | Leu | Ala |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Val | Leu | Arg | Val | Ala | Gly | Ser | Leu | Gln | Lys | Ser | Thr | Glu | Val | Met | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Met | Gln | Ser | Leu | Val | Lys | Ile | Pro | Glu | Ile | Gln | Ala | Thr | Met | Arg |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Leu | Ser | Lys | Glu | Met | Met | Lys | Ala | Gly | Ile | Ile | Glu | Glu | Met | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Asp | Thr | Phe | Glu | Ser | Met | Asp | Asp | Gln | Glu | Glu | Met | Glu | Glu | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Ala | Glu | Met | Glu | Ile | Asp | Arg | Ile | Leu | Phe | Glu | Ile | Thr | Ala | Gly | Ala |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Leu | Gly | Lys | Ala | Pro | Ser | Lys | Val | Thr | Asp | Ala | Leu | Pro | Glu | Pro | Glu |
| | | | 180 | | | | | | 185 | | | | 190 | | |
| Pro | Pro | Gly | Ala | Met | Ala | Ala | Ser | Glu | Asp | Glu | Glu | Glu | Glu | Glu | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ala | Leu | Glu | Ala | Met | Gln | Ser | Arg | Leu | Ala | Thr | Leu | Arg | Ser | | |
| | 210 | | | | | | 215 | | | | | 220 | | | |

<210> 5965

<211> 1011

<212> DNA

<213> Homo sapiens

<400> 5965

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 120
 agatgcctgg agagaatgag aaacagccgg gacaggctcc taaacaggta ccgccaggct
 180
 ggaagcagtg ggccagggaa ttctcagaac agctttctag ttcaagaggat gatggaagaa
 240
 gagtgggaatg ctttgcagnn tcagtgggag aattgtccag aagacttggc tcagttggag
 300
 gagctgatag acatggctgt gctggaggaa attcaacagg agctgatcaa ccaagagcag
 360
 tccatcatca gcgagtatga gaagagcttg cagtttgatg aaaagtgtct cagcatcatg
 420
 ctggctgagt gggaggcaaa cccactcatc tgtcctgtat gtacaaagta caacctgaga
 480
 atcacaagcg gtgtgggtgt gtgtcagttg ggcctgtcca tcccatctca ttcttctgag
 540
 ttgacagagc agaagcttcg tgctgttta gagggtagta taaatgagca cagtgcacat
 600
 tgtccccaca cacctgaatt ttcagtcact ggaggaacag aagaaaagtc cagtcttctc
 660
 atgagctgtc tggcctgtga tacttgggct gtgatcctct agagccagct tggactcaca
 720
 tcattctatg gggttgaaga caactcattc cctctgagga gccttgatca tacaagcctt
 780
 ttatttataa cttattttgt attgaaactt ttaaacaata ctgaagaaaa aaaaactttt
 840
 ccgacatctg ttcttggctt tttgtgacgc aggttgaagg gggaggaata gaaaaagaca
 900
 aactgccttg gaggagataa accaatttta tgtctatcat gttatacaaa aatctagaaa
 960
 taatagattt gtacagaaaa aaatgataat aaatgagaac aaaaaacata t
 1011

<210> 5966

<211> 233

<212> PRT

<213> Homo sapiens

<400> 5966

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 Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val Gly Ser Pro
 20 25 30
 Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg Met Arg Asn
 35 40 45
 Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly Ser Ser Gly
 50 55 60
 Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val Met Glu Glu
 65 70 75 80
 Glu Trp Asn Ala Leu Gln Xaa Gln Trp Xaa Asn Cys Pro Glu Asp Leu

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<210> 5967
<211> 1806
<212> DNA
<213> Homo sapiens
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<400> 5967
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120
tgtgcttttg ttgctaggca gtcaacagca gggctactaa agcacttcta atttagacaa
180
atcttttcct ctattttaga aatggatttc aatgggtgttc agtttgtttg cagaaaccta
240
ctgaaagtga gcatgttttt gaacacatta acaccgaagt tctacgtggc cctaacaggc
300
acttcctcac taatatcagg gcttattttg atatttgaat ggtggtattt tcgcaaatac
360
ggaacttcat tcattgaaca agtctcagta agccacttgc gcccccttct gggagggggt
420
gacaacaact cttccaacaa ttctaattcc agtaacgggg actcagattc caataggcaa
480
agtgtctcag aatgcaaagt atggcgaaat ccactaaatt tatttagggg tgctgaatac
540
aatcgggtata cttgggtgac aggacgagag cctcttactt actatgacat gaatctctct
600
gccccagacc accagacatt ctttacttgt gactcggacc atctgcgtcc cgcagatgca
660
ataatgcaga aagcctggag agagagaaac cccaagcta ggatttctgc agtcatgaa
720
gccttggaga taaatgagac gagacaccaa tgtcttggtg tacatcaaaa gaaggctagc
780
aatgtgtgcc agaagactcg ggaggaccag ggaagcaaag cccttctgga actacaagca
840

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tatgctgatg ttcaggcagt cttagcaaag tatgatgata taagcttacc aaagtcagca
 900
 acaatatgct acacagctgc tttgctcaaa gcaagagctg tctctgacaa attctctcct
 960
 gaggctgcat ctcggcgggg gctgagcaca gcagagatga atgcagtaga ggccattcat
 1020
 agagctgtgg aattcaatcc tcatgtgcca aaatacctac tagaaatgaa aagcttaatc
 1080
 ctacccccag aacatatacct gaagagagga gacagtgaag caatagcata tgcattcttt
 1140
 catcttgacac actggaagag agtggaaggg gctttgaatc ttttgattg tacgtgggaa
 1200
 ggcaacttttc ggatgatccc ttatcccttg gaaaaggggc acctatttta tccttaccca
 1260
 atctgtacag aaacagcaga ccgagagctg cttccatctt tccatgaagt ctcatgttac
 1320
 ccaaagaagg agcttccctt ctttattctc tttactgctg gattatgttc cttcacagcc
 1380
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 1440
 agtgtttgcc tagagggagg ccttggggaa tggatgggga aagccaaggg cataaaagca
 1500
 gcgtgagaga aatgggggtg ccttacagaa atgggtacga gcctgcaaag atcattgctc
 1560
 accatttaat tttcatgatc gtcaatggaa tcaaagcatt aagggtcaaa tgagaaagtg
 1620
 caggttggtta ctgcatgcct tgccctcattt cacaacaaat tcttagcagt ttccaaaaaa
 1680
 tgcaggaggt ccaaaaggat ggaatgattt aggaaatcct agcaaataaa aatgtgtggg
 1740
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 1800
 ctttcc
 1806

<210> 5968

<211> 434

<212> PRT

<213> Homo sapiens

<400> 5968

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Phe | Asn | Gly | Val | Gln | Phe | Val | Cys | Arg | Asn | Leu | Leu | Lys | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Met | Phe | Leu | Asn | Thr | Leu | Thr | Pro | Lys | Phe | Tyr | Val | Ala | Leu | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Thr | Ser | Ser | Leu | Ile | Ser | Gly | Leu | Ile | Leu | Ile | Phe | Glu | Trp | Trp |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Tyr | Phe | Arg | Lys | Tyr | Gly | Thr | Ser | Phe | Ile | Glu | Gln | Val | Ser | Val | Ser |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| His | Leu | Arg | Pro | Leu | Leu | Gly | Gly | Val | Asp | Asn | Asn | Ser | Ser | Asn | Asn |
| 65 | | | | 70 | | | | 75 | | | | | | 80 | |
| Ser | Asn | Ser | Ser | Asn | Gly | Asp | Ser | Asp | Ser | Asn | Arg | Gln | Ser | Val | Ser |
| | | | 85 | | | | 90 | | | | | | 95 | | |
| Glu | Cys | Lys | Val | Trp | Arg | Asn | Pro | Leu | Asn | Leu | Phe | Arg | Gly | Ala | Glu |

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      100      105      110
Tyr Asn Arg Tyr Thr Trp Val Thr Gly Arg Glu Pro Leu Thr Tyr Tyr
  115      120      125
Asp Met Asn Leu Ser Ala Gln Asp His Gln Thr Phe Phe Thr Cys Asp
  130      135      140
Ser Asp His Leu Arg Pro Ala Asp Ala Ile Met Gln Lys Ala Trp Arg
  145      150      155      160
Glu Arg Asn Pro Gln Ala Arg Ile Ser Ala Ala His Glu Ala Leu Glu
      165      170      175
Ile Asn Glu Thr Arg His Gln Cys Leu Gly Val His Gln Lys Lys Ala
      180      185      190
Ser Asn Val Cys Gln Lys Thr Arg Glu Asp Gln Gly Ser Lys Ala Leu
      195      200      205
Leu Glu Leu Gln Ala Tyr Ala Asp Val Gln Ala Val Leu Ala Lys Tyr
      210      215      220
Asp Asp Ile Ser Leu Pro Lys Ser Ala Thr Ile Cys Tyr Thr Ala Ala
  225      230      235      240
Leu Leu Lys Ala Arg Ala Val Ser Asp Lys Phe Ser Pro Glu Ala Ala
      245      250      255
Ser Arg Arg Gly Leu Ser Thr Ala Glu Met Asn Ala Val Glu Ala Ile
      260      265      270
His Arg Ala Val Glu Phe Asn Pro His Val Pro Lys Tyr Leu Leu Glu
      275      280      285
Met Lys Ser Leu Ile Leu Pro Pro Glu His Ile Leu Lys Arg Gly Asp
      290      295      300
Ser Glu Ala Ile Ala Tyr Ala Phe Phe His Leu Ala His Trp Lys Arg
  305      310      315      320
Val Glu Gly Ala Leu Asn Leu Leu His Cys Thr Trp Glu Gly Thr Phe
      325      330      335
Arg Met Ile Pro Tyr Pro Leu Glu Lys Gly His Leu Phe Tyr Pro Tyr
      340      345      350
Pro Ile Cys Thr Glu Thr Ala Asp Arg Glu Leu Leu Pro Ser Phe His
      355      360      365
Glu Val Ser Val Tyr Pro Lys Lys Glu Leu Pro Phe Phe Ile Leu Phe
      370      375      380
Thr Ala Gly Leu Cys Ser Phe Thr Ala Met Leu Ala Leu Leu Thr His
  385      390      395      400
Gln Phe Pro Glu Leu Met Gly Val Phe Ala Lys Ala Val Ser Val Cys
      405      410      415
Leu Glu Gly Gly Leu Gly Glu Trp Met Gly Lys Ala Lys Gly Ile Lys
      420      425      430
Ala Ala

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<210> 5969

<211> 429

<212> DNA

<213> Homo sapiens

<400> 5969

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ctgggcggcg gggaaggggt cccggatctg cagcctgggg tcttgggccag ccaggccatg
120

attgagaaga tcctgagcga ggacccccgg tggcaagatg ccaacttcgt gctgggcagc
 180
 tacaagacgg agcagtgccc gaagccgcca cgctgtgcc gccagggcta tgcgtgccc
 240
 cactaccaca atagccggga caggcggcgc aacccccggc ggttcagta cagggtccacg
 300
 ccctgccccca gcgtgaagca cggggatgag tggggggaac cctcacgctg cgatggcggc
 360
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 420
 tctacaaaa
 429

<210> 5970

<211> 143

<212> PRT

<213> Homo sapiens

<400> 5970

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Pro | Val | Cys | Asp | Val | Arg | Glu | Leu | Gln | Ala | Gln | Glu | Ala | Leu |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Gln | Asn | Gly | Gln | Leu | Gly | Gly | Gly | Glu | Gly | Val | Pro | Asp | Leu | Gln | Pro |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Gly | Val | Leu | Ala | Ser | Gln | Ala | Met | Ile | Glu | Lys | Ile | Leu | Ser | Glu | Asp |
| | | 35 | | | | | 40 | | | | | | 45 | | |
| Pro | Arg | Trp | Gln | Asp | Ala | Asn | Phe | Val | Leu | Gly | Ser | Tyr | Lys | Thr | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Cys | Pro | Lys | Pro | Pro | Arg | Leu | Cys | Arg | Gln | Gly | Tyr | Ala | Cys | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| His | Tyr | His | Asn | Ser | Arg | Asp | Arg | Arg | Arg | Asn | Pro | Arg | Arg | Phe | Gln |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Tyr | Arg | Ser | Thr | Pro | Cys | Pro | Ser | Val | Lys | His | Gly | Asp | Glu | Trp | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Pro | Ser | Arg | Cys | Asp | Gly | Gly | Asp | Gly | Cys | Gln | Tyr | Cys | His | Ser |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Arg | Thr | Glu | Gln | Gln | Phe | His | Pro | Glu | Ile | Tyr | Lys | Ser | Thr | Lys | |
| | 130 | | | | | 135 | | | | | | 140 | | | |

<210> 5971

<211> 565

<212> DNA

<213> Homo sapiens

<400> 5971

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 120
 catgtccctt aggtcagcta agccacatc agtgtccaaa taggcaacat ccctatttta
 180
 tagatgggtca tccccatttt agagatagct cccttttata tccccatttt acagggtgaag
 240
 gaattgaggc acagaagggt aggtcacttc tgcaagatga ccagctgaac caaaatttca
 300

gggtttcaaa caccaaagtgt gttcctttgt cttccgtttc ccacttgctt cccagaggct
 360
 cagcaagtag cctctggcca ctgagcatcc tcccgccac tttgctccct gcctcctgat
 420
 cccaggactg tggccgtgga tgccagagcg aggatgtgaa tcctgttggg ttctgaagcc
 480
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 540
 ggggtgcangc gtccagtgtc acgat
 565

<210> 5972

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5972

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Arg | Ala | Leu | Ser | Cys | Pro | Leu | Gly | Gln | Leu | Ser | Pro | His | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Pro | Asn | Arg | Gln | His | Pro | Tyr | Phe | Ile | Asp | Gly | His | Pro | His | Phe |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Arg | Asp | Ser | Ser | Leu | Leu | Tyr | Pro | His | Phe | Thr | Gly | Glu | Gly | Ile | Glu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Ala | Gln | Lys | Val | Arg | Ser | Leu | Leu | Gln | Asp | Asp | Gln | Leu | Asn | Gln | Asn |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Phe | Arg | Ala | Ser | Asn | Thr | Lys | Cys | Val | Pro | Leu | Ser | Ser | Val | Ser | His |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Leu | Pro | Arg | Gly | Ser | Ala | Ser | Ser | Leu | Trp | Pro | Leu | Ser | Ile | Leu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Pro | Pro | Thr | Leu | Leu | Pro | Ala | Ser | | | | | | | | |
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<211> 797

<212> DNA

<213> Homo sapiens

<400> 5973

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<210> 5974

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5974

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| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ser | Leu | Arg | Ile | Met | Asp | Ala | Arg | Ala | Gln | Leu | Leu | Leu | Arg | Val | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Pro | Gly | Pro | Ser | Leu | Thr | Ser | Gly | Ala | Leu | Thr | His | Ile | Arg | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | His | Pro | Gly | Leu | Ser | Pro | Thr | Ser | Gly | Thr | Leu | Met | Pro | Gly | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Arg | Gly | Gly | Pro | Ser | Phe | Gly | Thr | Pro | Ala | Leu | Arg | Arg | Arg | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Cys | His | Arg | Glu | Ala | Pro | Ala | Ser | Gly | Leu | Ser | Thr | Ala | Ala | Arg | Glu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
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<211> 2175

<212> DNA

<213> Homo sapiens

<400> 5975

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<211> 564

<212> PRT

<213> Homo sapiens

<400> 5976

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| Tyr | Ala | Tyr | Pro | Ser | Asp | Tyr | Asp | Met | His | Thr | Gly | Asp | Pro | Lys | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Leu | Ala | Tyr | Glu | Arg | Gln | Tyr | Glu | Gln | Gln | Thr | Tyr | Gln | Val | Ile |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Pro | Glu | Val | Ile | Lys | Asn | Phe | Ile | Gln | Tyr | Phe | His | Lys | Thr | Val | Ser |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Asp | Leu | Ile | Asp | Gln | Lys | Val | Tyr | Glu | Leu | Gln | Ala | Ser | Arg | Val | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Asp | Val | Ile | Asp | Gln | Lys | Val | Tyr | Glu | Ile | Gln | Asp | Ile | Tyr | Glu |
| | | | | 85 | | | | | 90 | | | | 95 | | |
| Asn | Ser | Trp | Thr | Lys | Leu | Thr | Glu | Arg | Phe | Phe | Lys | Asn | Thr | Pro | Trp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Glu | Ala | Glu | Ala | Ile | Ala | Pro | Gln | Val | Gly | Asn | Asp | Ala | Val | Phe |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Leu | Ile | Leu | Tyr | Lys | Glu | Leu | Tyr | Tyr | Arg | His | Ile | Tyr | Ala | Lys | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Gly | Gly | Pro | Ser | Leu | Glu | Gln | Arg | Phe | Glu | Ser | Tyr | Tyr | Asn | Tyr |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Cys | Asn | Leu | Phe | Asn | Tyr | Ile | Leu | Asn | Ala | Asp | Gly | Pro | Ala | Pro | Leu |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Glu | Leu | Pro | Asn | Gln | Trp | Leu | Trp | Asp | Ile | Ile | Asp | Glu | Phe | Ile | Tyr |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Phe | Gln | Ser | Phe | Ser | Gln | Tyr | Arg | Cys | Lys | Thr | Ala | Lys | Lys | Ser |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Glu | Glu | Glu | Ile | Asp | Phe | Leu | Arg | Ser | Asn | Pro | Lys | Ile | Trp | Asn | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| His | Ser | Val | Leu | Asn | Val | Leu | His | Ser | Leu | Val | Asp | Lys | Ser | Asn | Ile |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Asn | Arg | Gln | Leu | Glu | Val | Tyr | Thr | Ser | Gly | Gly | Asp | Pro | Glu | Ser | Val |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ala | Gly | Glu | Tyr | Gly | Arg | His | Ser | Leu | Tyr | Lys | Met | Leu | Gly | Tyr | Phe |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Ser | Leu | Val | Gly | Leu | Leu | Arg | Leu | His | Ser | Leu | Leu | Gly | Asp | Tyr | Tyr |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Gln | Ala | Ile | Lys | Val | Leu | Glu | Asn | Ile | Glu | Leu | Asn | Lys | Lys | Ser | Met |
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| Tyr | Ser | Arg | Val | Pro | Glu | Cys | Gln | Val | Thr | Thr | Tyr | Tyr | Tyr | Val | Gly |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Phe | Ala | Tyr | Leu | Met | Met | Arg | Arg | Tyr | Gln | Asp | Ala | Ile | Arg | Val | Phe |

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 Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His
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 370 375 380
 Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg
 385 390 395 400
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 405 410 415
 Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His
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 Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser
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 Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu
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 Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys
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 Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile
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 His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile
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<211> 2320

<212> DNA

<213> Homo sapiens

<400> 5977

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<210> 5978

<211> 77

<212> PRT

<213> Homo sapiens

<400> 5978

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| Met | Thr | Lys | Leu | Ile | Lys | Lys | Ser | Lys | Asn | Thr | Leu | Asn | Leu | Ser | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Arg | Leu | Gly | Ser | Val | Ala | His | Ala | Cys | Asp | Pro | Ser | Thr | Leu | Gly |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Gly | Arg | Gly | Gly | Gln | Ile | Ile | Xaa | Ala | Arg | Ser | Ser | Arg | Pro | Ala | Trp |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Thr | Thr | Trp | Arg | Xaa | Val | Phe | Thr | Lys | Asn | Thr | Lys | Ile | Ser | Trp | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Trp | Tyr | Thr | Pro | Val | Ile | Pro | Ala | Thr | Gln | Glu | Ala | | | |
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<211> 1095

<212> DNA

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<400> 5979

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<210> 5980

<211> 169

<212> PRT

<213> Homo sapiens

<400> 5980

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| Gly | Leu | Arg | Gln | Gly | His | Leu | Pro | Gly | Pro | Phe | Pro | Phe | Thr | Arg | Gln |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ser | Pro | Asp | Arg | Glu | Gly | Thr | Ser | Pro | Asp | Pro | Arg | Cys | Ser | Val | Leu |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Gly | Gln | Glu | Asp | Tyr | Asp | Arg | Leu | Arg | Pro | Leu | Ser | Tyr | Gln | Asn |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Thr | His | Leu | Val | Leu | Ile | Cys | Tyr | Asp | Val | Met | Asn | Pro | Thr | Ser | Tyr |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Asp | Asn | Val | Leu | Ile | Lys | Trp | Phe | Pro | Glu | Val | Thr | His | Phe | Cys | Arg |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Gly | Ile | Pro | Met | Val | Leu | Ile | Gly | Cys | Lys | Thr | Asp | Leu | Arg | Lys | Asp |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Lys | Glu | Gln | Leu | Arg | Lys | Leu | Arg | Ala | Ala | Gln | Leu | Glu | Pro | Ile | Thr |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Tyr | Met | Gln | Gly | Leu | Ser | Ala | Cys | Glu | Gln | Ile | Arg | Ala | Ala | Leu | Tyr |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Leu | Glu | Cys | Ser | Ala | Lys | Phe | Arg | Glu | Asn | Val | Glu | Asp | Val | Phe | Arg |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Glu | Ala | Ala | Lys | Val | Ala | Leu | Ser | Ala | Leu | Lys | Lys | Ala | Gln | Arg | Gln |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Lys | Lys | Arg | Arg | Leu | Cys | Leu | Leu | Leu | | | | | | | |
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<211> 677

<212> DNA

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<400> 5981

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<211> 98

<212> PRT

<213> Homo sapiens

<400> 5982

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Asn | Gly | Ser | Pro | Ala | Pro | Thr | Ser | Leu | Leu | Ser | Gly | Arg | Pro |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Ile | Pro | Lys | Ser | Asp | Asp | Gly | Thr | Arg | Thr | Gly | Arg | Asn | Asp | Ser |
| | | 20 | | | | | 25 | | | | 30 | | | | |
| Pro | Arg | Ala | Pro | Leu | Pro | Arg | Ser | Ser | Ala | Arg | Arg | Pro | Ser | Lys | Ala |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Asn | Leu | His | Thr | Leu | Gly | Gln | Leu | Lys | Leu | Ser | Arg | Arg | Cys | Arg | Glu |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Pro | Arg | Leu | Gly | Arg | Ala | Gly | Gln | Gln | Arg | Leu | His | Pro | Arg | Thr | Arg |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Arg | Arg | Gly | Ser | Gly | Pro | Leu | Val | Arg | Ala | Gly | Arg | Arg | Gly | Trp |
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Gly Lys

<210> 5983

<211> 790

<212> DNA

<213> Homo sapiens

<400> 5983

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cattgttttc cttaaattac tggtaaattt tgaataaaac agtcccaaga tgtgattatt
 180
 tgtgtaattt ttttttttaa tttgtaaaca gggatatgac agatcttcaa ccatgttaac
 240
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 660
 aacaactgtg ttttgtactt ccgaagatgg gcttgtatct ggtttcggac ggactgttaa
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 790

<210> 5984

<211> 186

<212> PRT

<213> Homo sapiens

<400> 5984

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Thr | Leu | Gly | Pro | Phe | Arg | Asn | Ser | Asn | Leu | Thr | Glu | Leu | Gly |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Leu | Gln | Glu | Ile | Lys | Thr | Ile | Gly | Tyr | Thr | Ser | Pro | Arg | Ser | Arg | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Asn | Arg | Gln | Cys | Pro | Gly | Glu | Lys | Glu | Pro | Val | Ser | Asp | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Gly | Leu | Asp | Ala | Val | Glu | Pro | Thr | Ala | Leu | His | Lys | Thr | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Thr | Pro | Ala | His | Asp | Arg | Ala | Glu | Pro | Asn | Ser | Gln | Leu | Asp | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Thr | His | Ser | Gly | Arg | Gly | Thr | Met | Tyr | Ser | Ser | Trp | Val | Lys | Ser | Pro |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Asp | Arg | Thr | Gly | Val | Asn | Phe | Ser | Val | Asn | Ser | Asn | Leu | Arg | Asp | Leu |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Thr | Pro | Ser | His | Gln | Leu | Glu | Val | Gly | Gly | Gly | Phe | Arg | Ile | Ser | Glu |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Ser | Lys | Cys | Leu | Met | Gln | Asp | Asp | Thr | Arg | Gly | Met | Phe | Met | Glu | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Val | Phe | Cys | Thr | Ser | Glu | Asp | Gly | Leu | Val | Ser | Gly | Phe | Gly | Arg |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Thr | Val | Asn | Asp | Asn | Leu | Ile | Asp | Gly | Asn | Cys | Thr | Pro | Gln | Asn | Pro |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Pro | Gln | Lys | Lys | Lys | Val | Ser | Leu | Leu | Glu | | | | | | |

180

185

<210> 5985

<211> 737

<212> DNA

<213> Homo sapiens

<400> 5985

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 180
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 300
 agaaccata cttcagcaag cttctcctga atctctcaca gcatgtggat gagagtggct
 360
 taagcctcac cctagcaaag gagcaggctc aggcattgaa ggaagtctga ctgcataaga
 420
 caacatggtt gaggtctgag attttacaca gagtcattca agagttgctt gtggactact
 480
 atgtgaagat acaagacaca aatgtaactt ctgaggacaa aaagtttcat gagacccttg
 540
 aacagcggct gcttgtaact gaactgatgc ggctcttagg tcctagccag gagagggaga
 600
 tacctccact gctggggctg gagaaagcgg accttctgga actcatgcca ctctcagagg
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 aaaaaaaaaa aaaaaaa
 737

<210> 5986

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5986

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 20 25 30
 Asp Leu Leu Gln Asn Pro Tyr Phe Ser Lys Leu Leu Leu Asn Leu Ser
 35 40 45
 Gln His Val Asp Glu Ser Gly Leu Ser Leu Thr Leu Ala Lys Glu Gln
 50 55 60
 Ala Gln Ala Trp Lys Glu Val Arg Leu His Lys Thr Thr Trp Leu Arg
 65 70 75 80
 Ser Glu Ile Leu His Arg Val Ile Gln Glu Leu Leu Val Asp Tyr Tyr
 85 90 95
 Val Lys Ile Gln Asp Thr Asn Val Thr Ser Glu Asp Lys Lys Phe His

| | | | | | |
|---|---|-----|-----|-----|-----|
| | 100 | | 105 | | 110 |
| Glu Thr Leu | Glu Gln Arg Leu Leu Val Thr Glu Leu Met Arg Leu Leu | | | | |
| | 115 | | 120 | | 125 |
| Gly Pro Ser Gln Glu Arg Glu Ile Pro Pro Leu Leu Gly Leu Glu Lys | | | | | |
| | 130 | | 135 | | 140 |
| Ala Asp Leu Leu Glu Leu Met Pro Leu Ser Glu Val Gly Gly Glu Ile | | | | | |
| 145 | | 150 | | 155 | 160 |
| Leu Glu Pro Asn Lys | | | | | |
| | 165 | | | | |

<210> 5987

<211> 1444

<212> DNA

<213> Homo sapiens

<400> 5987

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caccgcgtgg agctttacaa ggtgctgagt tcccttggtt accatgtggt cacctttgac
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240
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300
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420
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1140

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 1444

<210> 5988
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 5988
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 Thr Pro Ser Glu Arg Gly Met Thr Tyr Asp Ala Leu His Val Phe Asp
 35 40 45
 Trp Ile Lys Ala Arg Ser Gly Asp Asn Pro Val Tyr Ile Trp Gly His
 50 55 60
 Ser Leu Gly Thr Gly Val Ala Thr Ile Trp Cys Gly Ala Ser Val Ser
 65 70 75 80
 Glu Thr Pro Pro Asp Ala Leu Ile Leu Glu Ser Pro Phe Thr Asn Ile
 85 90 95
 Arg Glu Glu Ala Lys Ser His Pro Phe Ser Val Ile Tyr Arg Tyr Phe
 100 105 110
 Pro Gly Phe Asp Trp Phe Phe Leu Asp Pro Ile Thr Ser Ser Gly Ile
 115 120 125
 Lys Phe Ala Asn Asp Glu Asn Val Lys His Ile Ser Cys Pro Leu Leu
 130 135 140
 Ile Leu His Ala Glu Asp Asp Pro Val Val Pro Phe Gln Leu Gly Arg
 145 150 155 160
 Lys Leu Tyr Ser Ile Ala Ala Pro Ala Arg Ser Phe Arg Asp Phe Lys
 165 170 175
 Val Gln Phe Val Pro Phe His Ser Asp Leu Gly Tyr Arg His Lys Tyr
 180 185 190
 Ile Tyr Lys Ser Pro Glu Leu Pro Arg Ile Leu Arg Glu Phe Leu Gly
 195 200 205
 Lys Ser Glu Pro Glu His Gln His
 210 215

<210> 5989
 <211> 1583
 <212> DNA
 <213> Homo sapiens

<400> 5989

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120
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180
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240
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300
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360
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420
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480
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540
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600
aacaccattg tttgtaaagc ccatggggaa tggaatggta ctttagagtt cacctacaac
660
aatggagaaa ccaaagtcac cgacacaacc aactgccag tgtatcccaa gaagatcaga
720
cctcttgaga agcagggacc catggagtcc aggaacctct ggcgggagggt gacccgatac
780
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960
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1080
gaaattatat actatgaaaa gtgcaccccc aactctgct agaggaatga atttattcaa
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<210> 5990
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 5990
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 20 25 30
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 35 40 45
 Val Asn Thr His Val Trp Thr Lys Ser Lys Phe Met Gly Met Ser Val
 50 55 60
 Gly Val Ser Met Ile Gly Glu Gly Val Leu Arg Leu Leu Glu His Gly
 65 70 75 80
 Glu Glu Tyr Val Phe Thr Leu Pro Ser Ala Tyr Ala Arg Ser Ile Leu
 85 90 95
 Thr Ile Pro Trp Val Glu Leu Gly Gly Lys Val Ser Ile Asn Cys Ala
 100 105 110
 Lys Thr Gly Tyr Ser Ala Thr Val Ile Phe His Thr Lys Pro Phe Tyr
 115 120 125
 Gly Gly Lys Val His Arg Val Thr Ala Glu Val Lys His Asn Pro Thr
 130 135 140
 Asn Thr Ile Val Cys Lys Ala His Gly Glu Trp Asn Gly Thr Leu Glu
 145 150 155 160
 Phe Thr Tyr Asn Asn Gly Glu Thr Lys Val Ile Asp Thr Thr Thr Leu
 165 170 175
 Pro Val Tyr Pro Lys Lys Ile Arg Pro Leu Glu Lys Gln Gly Pro Met
 180 185 190
 Glu Ser Arg Asn Leu Trp Arg Glu Val Thr Arg Tyr Leu Arg Leu Gly
 195 200 205
 Asp Ile Asp Ala Ala Thr Glu Gln Lys Arg His Leu Glu Glu Lys Gln
 210 215 220
 Arg Val Glu Glu Arg Lys Arg Glu Asn Leu Arg Thr Pro Trp Lys Pro
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 Lys Tyr Phe Ile Gln Glu Gly Asp Gly Trp Val Tyr Phe Asn Pro Leu
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 Trp Lys Ala His
 260

<210> 5991
 <211> 2440
 <212> DNA
 <213> Homo sapiens

<400> 5991
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 120
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 180

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240
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300
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420
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1680
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 2280
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 2440

<210> 5992
 <211> 301
 <212> PRT
 <213> Homo sapiens

<400> 5992
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 Val Val Phe Asp Glu Ala Asp Arg Leu Phe Glu Met Gly Phe Ala Glu
 35 40 45
 Gln Leu Gln Glu Ile Ile Ala Arg Leu Pro Gly Gly His Gln Thr Val
 50 55 60
 Leu Phe Ser Ala Thr Leu Pro Lys Leu Leu Val Glu Phe Ala Arg Ala
 65 70 75 80
 Gly Leu Thr Glu Pro Val Leu Ile Arg Leu Asp Val Asp Thr Lys Leu
 85 90 95
 Asn Glu Gln Leu Lys Thr Ser Phe Phe Leu Val Arg Glu Asp Thr Lys
 100 105 110
 Ala Ala Val Leu Leu His Leu Leu His Asn Val Val Arg Pro Gln Asp
 115 120 125
 Gln Thr Val Val Phe Val Ala Thr Lys His His Ala Glu Tyr Leu Thr
 130 135 140
 Glu Leu Leu Thr Thr Gln Xaa Val Ser Cys Ala His Ile Tyr Ser Ala
 145 150 155 160
 Leu Asp Pro Thr Ala Arg Lys Ile Asn Leu Ala Lys Phe Thr Leu Gly
 165 170 175
 Lys Cys Ser Thr Leu Ile Val Thr Asp Leu Ala Ala Arg Gly Leu Asp
 180 185 190
 Ile Pro Leu Leu Asp Asn Val Ile Asn Tyr Ser Phe Pro Ala Lys Gly

| | | |
|---|-----|-----|
| 195 | 200 | 205 |
| Lys Leu Phe Leu His Arg Val Gly Arg Val Ala Arg Ala Gly Arg Ser | | |
| 210 | 215 | 220 |
| Gly Thr Ala Tyr Ser Leu Val Ala Pro Asp Glu Ile Pro Tyr Leu Leu | | |
| 225 | 230 | 235 |
| Asp Leu His Leu Phe Leu Gly Arg Ser Leu Xaa Pro Arg Pro Thr Pro | | |
| 245 | 250 | 255 |
| Gln Gly Ala Leu Arg Cys Gly Arg Cys Gly Trp His Ala Gly Ser Gly | | |
| 260 | 265 | 270 |
| Ala Thr Glu Cys Gly Gly Arg Gly Gly Gln Trp Ser Ala Glu His Pro | | |
| 275 | 280 | 285 |
| Gly Gly Ile Ala Gly Ala Thr Gly Pro Gly Pro Arg Cys | | |
| 290 | 295 | 300 |

<210> 5993

<211> 7858

<212> DNA

<213> Homo sapiens

<400> 5993

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120
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180
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240
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360
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420
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<213> Homo sapiens

<400> 6000

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| Asp | Arg | Glu | Ala | Val | Ala | Thr | Ala | Val | Gln | Arg | Val | Ala | Gly | Met | Leu |
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| Gln | Arg | Pro | Asp | Gln | Leu | Asp | Lys | Val | Glu | Gln | Tyr | Arg | Arg | Arg | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Arg | Lys | Lys | Ala | Ser | Val | Glu | Ala | Arg | Leu | Lys | Ala | Ala | Ile | Gln |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ser | Gln | Leu | Asp | Gly | Val | Arg | Thr | Gly | Leu | Ser | Gln | Leu | His | Asn | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Asn | Asp | Val | Lys | Asp | Ile | Gln | Gln | Ser | Leu | Ala | Asp | Val | Ser | Lys |
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| Asp | Trp | Arg | Gln | Ser | Ile | Asn | Thr | Ile | Glu | Ser | Leu | Lys | Asp | Val | Lys |
| | | 100 | | | | | 105 | | | | | | 110 | | |
| Asp | Ala | Val | Val | Gln | His | Ser | Gln | Leu | Ala | Ala | Ala | Val | Glu | Asn | Leu |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Lys | Asn | Ile | Phe | Ser | Val | Pro | Glu | Ile | Val | Arg | Glu | Thr | Gln | Asp | Leu |
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| Ile | Glu | Gln | Gly | Ala | Leu | Leu | Gln | Ala | His | Arg | Lys | Leu | Met | Asp | Leu |
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| Glu | Cys | Ser | Arg | Asp | Gly | Leu | Met | Tyr | Glu | Gln | Tyr | Arg | Met | Asp | Ser |
| | | | 165 | | | | | 170 | | | | | 175 | | |
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| | 180 | | | | | | 185 | | | | | | 190 | | |
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| Arg | Ser | Leu | Val | Thr | Val | Arg | Arg | Asp | Pro | Thr | Leu | Leu | Val | Ser | Val |
| | 210 | | | | | 215 | | | | 220 | | | | | |
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| Arg | Lys | Lys | Gln | Thr | Gly | Phe | Val | Pro | Pro | Gly | Arg | Pro | Lys | Asn | Trp |
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| Lys | Glu | Lys | Met | Phe | Thr | Ile | Leu | Glu | Arg | Thr | Val | Thr | Thr | Arg | Ile |
| | 260 | | | | | | 265 | | | | | 270 | | | |
| Glu | Gly | Thr | Gln | Ala | Asp | Thr | Arg | Glu | Ser | Asp | Lys | Met | Trp | Leu | Val |

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| 290 | 295 | 300 |
| Ala Lys Asn Leu Met Val | Gln Cys Phe Pro Pro | His Tyr Glu Ile Phe |
| 305 | 310 | 315 |
| Lys Asn Leu Leu Asn Met | Tyr His Gln Ala Leu | Ser Thr Arg Met Gln |
| 325 | 330 | 335 |
| Asp Leu Ala Ser Glu Asp | Leu Glu Ala Asn Glu | Ile Val Ser Leu Leu |
| 340 | 345 | 350 |
| Thr Trp Val Leu Asn Thr | Tyr Thr Ser Thr Glu | Met Met Arg Asn Val |
| 355 | 360 | 365 |
| Glu Leu Ala Pro Glu Val | Asp Val Gly Thr Leu | Glu Pro Leu Leu Ser |
| 370 | 375 | 380 |
| Pro His Val Val Ser Glu | Leu Leu Asp Thr Tyr | Met Ser Thr Leu Thr |
| 385 | 390 | 395 |
| Ser Asn Ile Ile Ala Trp | Leu Arg Lys Ala Leu | Glu Thr Asp Lys Lys |
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| Asp Trp Val Lys Glu Thr | Glu Pro Glu Ala Asp | Gln Asp Gly Tyr Tyr |
| 420 | 425 | 430 |
| Gln Thr Thr Leu Pro Ala | Ile Val Phe Gln Met | Phe Glu Gln Asn Leu |
| 435 | 440 | 445 |
| Gln Val Ala Ala Gln Ile | Ser Glu Asp Leu Lys | Thr Lys Val Leu Val |
| 450 | 455 | 460 |
| Leu Cys Leu Gln Gln Met | Asn Ser Phe Leu Ser | Arg Tyr Lys Asp Glu |
| 465 | 470 | 475 |
| Ala Gln Leu Tyr Lys Glu | Glu His Leu Arg Asn | Arg Gln His Pro His |
| 485 | 490 | 495 |
| Cys Tyr Val Gln Tyr Met | Ile Ala Ile Ile Asn | Asn Cys Gln Thr Phe |
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| Lys Glu Ser Ile Val Ser | Leu Lys Arg Lys Tyr | Leu Lys Asn Glu Val |
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| Glu Glu Gly Val Ser Pro | Ser Gln Pro Ser Met | Asp Gly Ile Leu Asp |
| 530 | 535 | 540 |
| Ala Ile Ala Lys Glu Gly | Cys Ser Gly Leu Leu | Glu Glu Val Phe Leu |
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| Asp Leu Glu Gln His Leu | Asn Glu Leu Met Thr | Lys Lys Trp Leu Leu |
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| Gly Ser Asn Ala Val Asp | Ile Ile Cys Val Thr | Val Glu Asp Tyr Phe |
| 580 | 585 | 590 |
| Asn Asp Phe Ala Lys Ile | Lys Lys Pro Tyr Lys | Lys Arg Met Thr Ala |
| 595 | 600 | 605 |
| Glu Ala His Arg Arg Val | Val Val Glu Tyr Leu | Arg Ala Val Met Gln |
| 610 | 615 | 620 |
| Lys Arg Ile Ser Phe Arg | Ser Pro Glu Glu Arg | Lys Glu Gly Ala Glu |
| 625 | 630 | 635 |
| Lys Met Val Arg Glu Ala | Glu Gln Arg Arg Phe | Leu Phe Arg Lys Leu |
| 645 | 650 | 655 |
| Ala Ser Gly Phe Gly Glu | Asp Val Asp Gly Tyr | Cys Asp Thr Ile Val |
| 660 | 665 | 670 |
| Ala Val Ala Glu Val Ile | Lys Leu Thr Asp Pro | Ser Leu Leu Tyr Leu |
| 675 | 680 | 685 |
| Glu Val Ser Thr Leu Val | Ser Lys Tyr Pro Asp | Ile Arg Asp Asp His |
| 690 | 695 | 700 |
| Ile Gly Ala Leu Leu Ala | Val Arg Gly Asp Ala | Ser Arg Asp Met Lys |

| | | | | | | |
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| Ser Tyr Val Pro Leu Phe Lys Asp Ile Val Val Pro Ser Leu Asn Val | | | | | | |
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 Thr Thr Glu Ile Gln Glu Ala Ser Glu Gly Pro Gly Ala Asp Glu Val
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 Cys Glu Arg Glu Met Gln Arg Ile Thr Leu Pro Leu Ser Ala Phe Thr
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<210> 6004

<211> 140

<212> PRT

<213> Homo sapiens

<400> 6004

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ala | Thr | Gly | Cys | Thr | Glu | Leu | Gly | Ser | Trp | Glu | Thr | Val | Pro | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Ala | Val | Pro | Lys | Val | Ala | Pro | Gly | Thr | Met | Pro | Thr | Arg | Pro | Glu |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gly | Gly | Thr | Glu | Thr | Thr | Ser | Met | Leu | Xaa | Val | Pro | Gly | Val | Thr | Gln |
| | | | 50 | | | 55 | | | | 60 | | | | | |
| Ser | Pro | Arg | Gly | Glu | Arg | Gly | Ser | Gly | Pro | His | Ala | Val | Gln | Gly | Val |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ala | Leu | Pro | Xaa | Arg | Gly | Ser | Pro | Arg | Gly | Pro | Gly | Pro | Arg | Ala | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Arg | Gly | Arg | Asp | Cys | Gly | Gly | Asn | Gly | Pro | Ala | Glu | Ala | Pro | Ala |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Pro | Leu | Ser | Ser | Ala | Phe | Gln | Pro | Pro | Ala | Leu | Gly | Pro | Ala | Pro | Lys |
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<211> 1735

<212> DNA

<213> Homo sapiens

<400> 6005

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<210> 6006

<211> 200

<212> PRT

<213> Homo sapiens

<400> 6006

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Lys | Gly | Gln | Lys | Gly | Asp | Pro | Gly | Glu | Pro | Gly | Pro | Ala | Gly | Leu | Lys |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Gly | Glu | Ala | Gly | Glu | Met | Gly | Leu | Ser | Gly | Leu | Pro | Gly | Ala | Asp | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Lys | Gly | Glu | Lys | Gly | Glu | Ser | Ala | Ser | Gln | Pro | Thr | Gly | Glu | Pro |
| | | 50 | | | | | 55 | | | | 60 | | | | |
| Gly | Ser | Ala | His | Ser | Glu | Pro | Gly | Pro | Pro | Gly | Pro | Pro | Gly | Pro | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gly | Pro | Met | Gly | Leu | Gln | Gly | Ile | Gln | Gly | Pro | Lys | Gly | Leu | Asp | Gly |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Ala | Lys | Gly | Glu | Lys | Gly | Ala | Ser | Gly | Glu | Arg | Gly | Ser | Ser | Gly | Leu |
| | | 100 | | | | | | 105 | | | | 110 | | | |
| Pro | Gly | Pro | Val | Gly | Pro | Pro | Gly | Leu | Ile | Gly | Leu | Pro | Gly | Thr | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Glu | Lys | Gly | Arg | Pro | Gly | Glu | Pro | Gly | Leu | Asp | Gly | Phe | Pro | Gly |
| | | 130 | | | | | 135 | | | | 140 | | | | |
| Pro | Arg | Gly | Glu | Lys | Gly | Asp | Arg | Ser | Glu | Arg | Gly | Glu | Lys | Gly | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Arg | Gly | Val | Pro | Gly | Arg | Lys | Gly | Val | Lys | Gly | Gln | Lys | Gly | Glu | Pro |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Gly | Pro | Pro | Gly | Leu | Asp | Gln | Pro | Cys | Pro | Val | Gly | Pro | Asp | Gly | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Val | Pro | Gly | Cys | Trp | His | Lys | | | | | | | | |
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<210> 6007

<211> 693

<212> DNA

<213> Homo sapiens

<400> 6007

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<210> 6008

<211> 214

<212> PRT

<213> Homo sapiens

<400> 6008

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| Gln | Pro | Leu | Lys | Ser | Pro | Ser | Ser | Asp | Asn | Leu | Tyr | Ser | Ala | Phe |
| 1 | | | 5 | | | | 10 | | | | | 15 | | |
| Thr | Ser | Asp | Gly | Ala | Ile | Ser | Val | Pro | Ser | Leu | Ser | Ala | Pro | Gly |
| | | 20 | | | | | 25 | | | | | 30 | | Gln |
| Gly | Lys | Met | Val | Lys | Lys | Val | Cys | Pro | Cys | Asn | Gln | Leu | Cys | Arg |
| | | 35 | | | | 40 | | | | | 45 | | | Thr |
| Ser | Ser | Thr | Asn | Thr | Val | Gly | Ala | Thr | Val | Asn | Ser | Gln | Ala | Gln |
| | | 50 | | | | 55 | | | | | 60 | | | |
| Ala | Gln | Pro | Pro | Ala | Met | Thr | Ser | Ser | Arg | Lys | Gly | Thr | Phe | Thr |
| 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Leu | His | Lys | Leu | Val | Asp | Asn | Trp | Ala | Arg | Asp | Ala | Met | Asn |
| | | | 85 | | | | | 90 | | | | | 95 | Leu |
| Ser | Gly | Arg | Arg | Gly | Ser | Lys | Gly | His | Met | Asn | Tyr | Glu | Gly | Pro |
| | | 100 | | | | | 105 | | | | | 110 | | Gly |
| Met | Ala | Arg | Lys | Phe | Ser | Ala | Pro | Gly | Gln | Leu | Cys | Ile | Ser | Met |
| | | 115 | | | | 120 | | | | | 125 | | | Thr |
| Ser | Asn | Leu | Gly | Gly | Ser | Ala | Pro | Ile | Ser | Ala | Ala | Ser | Ala | Thr |
| | | 130 | | | | 135 | | | | | 140 | | | Ser |
| Leu | Gly | His | Phe | Thr | Lys | Ser | Met | Cys | Pro | Pro | Gln | Gln | Tyr | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | 160 |
| Pro | Ala | Thr | Pro | Phe | Gly | Ala | Gln | Trp | Ser | Gly | Thr | Gly | Gly | Pro |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 165 | | 170 | | 175 | | | | | | | | | | |
| Pro | Gln | Pro | Leu | Gly | Gln | Phe | Gln | Pro | Val | Gly | Thr | Ala | Ser | Leu | Gln |
| | 180 | | 185 | | 190 | | | | | | | | | | |
| Asn | Phe | Asn | Ile | Ser | Asn | Leu | Gln | Lys | Ser | Ile | Ser | Asn | Pro | Pro | Gly |
| | 195 | | 200 | | 205 | | | | | | | | | | |
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<210> 6009

<211> 1570

<212> DNA

<213> Homo sapiens

<400> 6009

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 <211> 468
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<400> 6010
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 35 40 45
 Ala Met Ala Cys Ala Leu Gly Tyr Asp Ile His Phe His Asp Lys Lys
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 Ile Leu Leu Leu Glu Ala Gly Pro Lys Lys Val Leu Glu Lys Leu Ser
 65 70 75 80
 Glu Thr Tyr Ser Asn Arg Val Ser Ser Ile Ser Pro Gly Ser Ala Thr
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 Leu Leu Ser Ser Phe Gly Ala Trp Asp His Ile Cys Asn Met Arg Tyr
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 Asp Arg Val Thr Val Leu Tyr Arg Ser Lys Ala Ile Arg Tyr Thr Trp
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 Pro Cys Pro Phe Pro Met Ala Asp Ser Ser Pro Trp Val His Ile Thr
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 Gly His Asn Ser Gly Val Arg Gln Ala Val Gly Ile Gln Asn Val Ser
 210 215 220
 Trp Asn Tyr Asp Gln Ser Ala Val Val Ala Thr Leu His Leu Ser Glu
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 His Arg Val His Pro Leu Ala Gly Gln Gly Val Asn Met Gly Phe Gly
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 385 390 395 400
 Lys Asp Leu Gly Ser Val Ser His Leu Thr Gly Tyr Glu Thr Glu Arg
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 Gln Arg His Asn Thr Ala Leu Leu Ala Ala Thr Asp Leu Leu Lys Arg
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 Leu Tyr Ser Thr Ser Ala Ser Pro Leu Val Leu Leu Arg Thr Trp Gly
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<210> 6012

<211> 219

<212> PRT

<213> Homo sapiens

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Phe | Ser | Lys | Gly | Val | Arg | Glu | Val | Glu | Arg | Val | Leu | Gln | Leu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Glu | Pro | Gly | Asp | Ser | Ala | Gln | Phe | Thr | Lys | Ala | Ile | Ala | Ile | Ile |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Phe | Pro | Phe | Leu | Tyr | Leu | Leu | Glu | Lys | Val | Glu | Cys | Thr | Pro | Ser | Gln |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Glu | His | Leu | Lys | His | Gln | Thr | Val | Tyr | Arg | Leu | Leu | Lys | Cys | Ala | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Arg | Gly | Lys | Asn | Gly | Phe | Thr | Pro | Leu | His | Met | Ala | Val | Asp | Lys | Asp |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Thr | Thr | Asn | Val | Gly | Arg | Tyr | Pro | Val | Gly | Arg | Phe | Pro | Ser | Leu | His |
| | | | 100 | | | | | | 105 | | | | 110 | | |
| Val | Val | Lys | Val | Leu | Leu | Asp | Cys | Gly | Ala | Asp | Pro | Asp | Ser | Arg | Asp |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Phe | Asp | Asn | Asn | Thr | Pro | Leu | His | Ile | Ala | Ala | Gln | Asn | Asn | Cys | Pro |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Ala | Ile | Met | Asn | Ala | Leu | Ile | Glu | Ala | Gly | Ala | His | Met | Asp | Ala | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asn | Ala | Phe | Lys | Lys | Thr | Ala | Tyr | Glu | Leu | Leu | Asp | Glu | Lys | Leu | Leu |

| | | | | | |
|---|-----|-----|-----|--|-----|
| | 165 | | 170 | | 175 |
| Ala Arg Gly Thr Met Gln Pro Phe Asn Tyr Val Thr Leu Gln Cys Leu | | | | | |
| | 180 | | 185 | | 190 |
| Ala Ala Arg Ala Leu Asp Lys Asn Lys Ile Pro Tyr Lys Gly Phe Ile | | | | | |
| | 195 | | 200 | | 205 |
| Pro Glu Asp Leu Glu Ala Phe Ile Glu Leu His | | | | | |
| 210 | | 215 | | | |

<210> 6013
 <211> 2204
 <212> DNA
 <213> Homo sapiens

<400> 6013
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<210> 6014

<211> 182

<212> PRT

<213> Homo sapiens

<400> 6014

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| Arg | Gln | His | Asn | Lys | Asp | Lys | Pro | Phe | Lys | Cys | His | Asn | Cys | His | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Tyr | Thr | Asp | Ala | Ala | Ser | Leu | Glu | Val | His | Leu | Ser | Thr | His | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Lys | His | Ala | Lys | Val | Tyr | Thr | Cys | Thr | Ile | Cys | Ser | Arg | Ala | Tyr |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Thr | Ser | Glu | Thr | Tyr | Leu | Met | Lys | His | Met | Arg | Lys | His | Asn | Pro | Pro |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Asp | Leu | Gln | Gln | Gln | Val | Gln | Ala | Ala | Ala | Ala | Ala | Ala | Ala | Val | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gln | Ala | Gln | Ala | Gln | Ala | Gln | Ala | Gln | Ala | Gln | Ala | Gln | Ala | Gln | Ala |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Gln | Ala | Gln | Ala | Gln | Ala | Ser | Gln | Ala | Ser | Gln | Gln | Gln | Gln | Gln | Gln |

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          100          105          110
Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro His Phe Gln Ser
      115          120          125
Pro Gly Ala Ala Pro Gln Gly Gly Gly Gly Asp Ser Asn Pro Asn
      130          135          140
Pro Pro Pro Gln Cys Ser Phe Asp Leu Thr Pro Tyr Lys Thr Ala Glu
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Glu His Leu Ala Ser Ser
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 <212> DNA
 <213> Homo sapiens

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612

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<210> 6016
 <211> 99
 <212> PRT
 <213> Homo sapiens

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Arg Cys Lys Leu Asn Asn Asn Ser Trp Ser Gly Leu Thr Cys Pro Thr
35     40     45
Leu Ser Met Ser Cys Asn Gln Asn Lys Leu Asp Ser Pro Gly Arg Ala

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| | | | | | |
|---------------------|-------------------------|---------------------|----|----|--|
| 50 | | 55 | | 60 | |
| Ser His Gly Ser Ser | Leu Pro Phe Asn Gln Asp | Ser Gln Lys Pro Ala | | | |
| 65 | 70 | 75 | 80 | | |
| Phe Tyr Asn Ile Phe | Leu Lys Lys Ser His Ser | Phe Gln Ser Leu Leu | | | |
| | 85 | 90 | 95 | | |
| Gln Tyr Ile | | | | | |

<210> 6017

<211> 2091

<212> DNA

<213> Homo sapiens

<400> 6017

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<210> 6018
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 6018
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 35 40 45
 Asn Ser Gln Gln Ala Ala Asn Val Leu Ser Gly Ala Cys Gly Leu Gln
 50 55 60
 Arg Gly Asp Arg Val Ala Val Met Leu Pro Arg Val Pro Glu Trp Trp
 65 70 75 80
 Leu Val Ile Leu Gly Cys Ile Arg Ala Gly Leu Ile Phe Met Pro Gly
 85 90 95
 Thr Ile Gln Met Lys Ser Thr Asp Ile Leu Tyr Arg Leu Gln Met Ser
 100 105 110
 Lys Ala Lys Ala Ile Val Ala Gly Asp Glu Val Ile Gln Glu Val Asp
 115 120 125
 Thr Val Ala Ser Glu Cys Pro Ser Leu Arg Ile Lys Leu Leu Val Ser

| | | | | | |
|---------------------|---------------------|---------------------|-----|-----|--|
| 130 | | 135 | | 140 | |
| Glu Lys Ser Cys Asp | Gly Trp Leu Asn Phe | Lys Lys Leu Leu Asn | Glu | | |
| 145 | 150 | 155 | 160 | | |
| Ala Ser Thr Thr His | His Cys Val Glu Thr | Gly Ser Gln Glu Ala | Ser | | |
| | 165 | 170 | 175 | | |
| Ala Ile Tyr Phe Thr | Ser Gly Thr Ser Gly | Leu Pro Lys Met Ala | Glu | | |
| | 180 | 185 | 190 | | |
| His Ser Tyr Ser Ser | Leu Gly Leu Lys Ala | Lys Met Asp Ala Gly | Trp | | |
| | 195 | 200 | 205 | | |
| Thr Gly Leu Gln Ala | Ser Asp Ile Met Trp | Thr Ile Ser Asp Thr | Gly | | |
| | 210 | 215 | 220 | | |
| Trp Ile Leu Asn Ile | Leu Gly Ser Leu Leu | Glu Ser Trp Thr Leu | Gly | | |
| 225 | 230 | 235 | 240 | | |
| Ala Cys Thr Phe Val | His Leu Leu Pro Lys | Phe Asp Pro Leu Val | Ile | | |
| | 245 | 250 | 255 | | |
| Leu Lys Thr Leu Ser | Ser Tyr Pro Ile Lys | Ser Met Met Gly Ala | Pro | | |
| | 260 | 265 | 270 | | |
| Ile Val Tyr Arg Met | Leu Leu Gln Gln Asp | Leu Ser Ser Tyr Lys | Phe | | |
| | 275 | 280 | 285 | | |
| Pro His Leu Gln Asn | Cys Leu Ala Gly Gly | Glu Ser Leu Leu Pro | Glu | | |
| | 290 | 295 | 300 | | |
| Thr Leu Glu Asn Trp | Arg Ala Gln Thr Gly | Leu Asp Ile Arg Glu | Phe | | |
| 305 | 310 | 315 | 320 | | |
| Tyr Gly Gln Thr Glu | Thr Gly Leu Thr Cys | Met Val Ser Lys Thr | Met | | |
| | 325 | 330 | 335 | | |
| Lys Ile Lys Pro Gly | Tyr Met Gly Thr Ala | Ala Ser Cys Tyr Asp | Val | | |
| | 340 | 345 | 350 | | |
| Gln Val Ile Asp Asp | Lys Gly Asn Val Leu | Pro Pro Gly Thr Glu | Gly | | |
| | 355 | 360 | 365 | | |
| Asp Ile Gly Ile Arg | Val Lys Pro Ile Arg | Pro Ile Gly Ile Phe | Ser | | |
| | 370 | 375 | 380 | | |
| Gly Tyr Val Glu Asn | Pro Asp Lys Thr Ala | Ala Asn Ile Arg Gly | Asp | | |
| 385 | 390 | 395 | 400 | | |
| Phe Trp Leu Leu Gly | Asp Arg Gly Ile Lys | Asp Glu Asp Gly Tyr | Phe | | |
| | 405 | 410 | 415 | | |
| Gln Phe Met Gly Arg | Ala Asp Asp Ile Ile | Asn Ser Ser Gly Tyr | Arg | | |
| | 420 | 425 | 430 | | |
| Ile Gly Pro Ser Glu | Val Glu Asn Ala Leu | Met Lys His Pro Ala | Val | | |
| | 435 | 440 | 445 | | |
| Val Glu Thr Ala Val | Ile Ser Ser Pro Asp | Pro Val Arg Gly Glu | Val | | |
| | 450 | 455 | 460 | | |
| Val Lys Ala Phe Val | Val Leu Ala Ser Gln | Phe Leu Ser His Asp | Pro | | |
| 465 | 470 | 475 | 480 | | |
| Glu Gln Leu Thr Lys | Glu Leu Gln Gln His | Val Lys Ser Val Thr | Ala | | |
| | 485 | 490 | 495 | | |
| Pro Tyr Lys Tyr Pro | Arg Lys Ile Glu Phe | Val Leu Asn Leu Pro | Lys | | |
| | 500 | 505 | 510 | | |
| Thr Val Thr Gly Lys | Ile Gln Arg Ala Lys | Leu Arg Asp Lys Glu | Trp | | |
| | 515 | 520 | 525 | | |
| Lys Met Ser Gly Lys | Ala Arg Ala Gln | | | | |
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<211> 3002

<212> DNA

<213> Homo sapiens

<400> 6019

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3002

<210> 6020

<211> 387

<212> PRT

<213> Homo sapiens

<400> 6020

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      35           40           45
Ile Glu Asp Ile Cys Ile Cys Cys Gly Ser Leu Gln Val His Thr Gln
      50           55           60
His Pro Leu Phe Glu Gly Gly Ile Cys Ala Pro Cys Lys Asp Lys Phe
65           70           75           80
Leu Asp Ala Leu Phe Leu Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys
      85           90           95
Ser Ile Cys Cys Ser Gly Glu Thr Leu Leu Ile Cys Gly Asn Pro Asp
      100          105          110
Cys Thr Arg Cys Tyr Cys Phe Glu Cys Val Asp Ser Leu Val Gly Pro
      115          120          125
Gly Thr Ser Gly Lys Val His Ala Met Ser Asn Trp Val Cys Tyr Leu
      130          135          140
Cys Leu Pro Ser Ser Arg Ser Gly Leu Leu Gln Arg Arg Arg Lys Trp
145          150          155          160
Arg Ser Gln Leu Lys Ala Phe Tyr Asp Arg Glu Ser Glu Asn Pro Leu
      165          170          175
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<213> Homo sapiens

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| 35 | 40 | 45 | |
| Ile Pro Ser Arg Ala Gly Ala Asn Trp Ser Val Asn Phe His Arg Ile | | | |
| 50 | 55 | 60 | |
| Asn Glu Asn Glu Lys Ser Pro Ser Gln Asn Arg Lys Ala Lys Asp Ala | | | |
| 65 | 70 | 75 | 80 |
| Thr Ser Asp Asn Gly Lys Asp Gly Leu Ala Tyr Ser Ala Leu Leu Lys | | | |
| 85 | 90 | 95 | |
| Asn Glu Leu Leu Gly Ala Gly Ile Glu Lys Val Gln Asp Pro Gln Thr | | | |
| 100 | 105 | 110 | |
| Glu Asp Arg Arg Leu Gln Pro Ser Thr Pro Glu Lys Lys Gly Leu Phe | | | |
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| Val Ser Pro Tyr Ser Leu Ser Pro Val Ser Asn Lys Ser Gln Lys Leu | | | |
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| Leu Arg Ser Pro Arg Lys Pro Thr Arg Lys Ile Ser Lys Ile Pro Phe | | | |
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| Lys Val Leu Asp Ala Pro Glu Leu Gln Asp Asp Phe Tyr Leu Asn Leu | | | |
| 180 | 185 | 190 | |
| Val Asp Trp Ser Ser Leu Asn Val Leu Ser Val Gly Leu Gly Thr Cys | | | |
| 195 | 200 | 205 | |
| Val Tyr Leu Trp Ser Ala Cys Thr Ser Gln Val Thr Arg Leu Cys Asp | | | |
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| Leu Ser Val Glu Gly Asp Ser Val Thr Ser Val Gly Trp Ser Glu Arg | | | |
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| Gly Asn Leu Val Ala Val Gly Thr His Lys Gly Phe Val Gln Ile Trp | | | |
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| Asp Ala Ala Ala Gly Lys Lys Leu Ser Met Leu Glu Gly His Thr Ala | | | |
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| Arg Val Gly Ala Leu Ala Trp Asn Ala Glu Gln Leu Ser Ser Gly Ser | | | |
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| Arg Asp Arg Met Ile Leu Gln Arg Asp Ile Arg Thr Pro Pro Leu Gln | | | |
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| Ser Glu Arg Arg Leu Gln Gly His Arg Gln Glu Val Cys Gly Leu Lys | | | |
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| Trp Ser Thr Asp His Gln Leu Leu Ala Ser Gly Gly Asn Asp Asn Lys | | | |
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| Leu Leu Val Trp Asn His Ser Ser Leu Ser Pro Val Gln Gln Tyr Thr | | | |
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| Glu His Leu Ala Ala Val Lys Ala Ile Ala Trp Ser Pro His Gln His | | | |
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| Gly Leu Leu Ala Ser Gly Gly Gly Thr Ala Asp Arg Cys Ile Arg Phe | | | |
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| Trp Asn Thr Leu Thr Gly Gln Pro Leu Gln Cys Ile Asp Thr Gly Ser | | | |
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| Gln Val Cys Asn Leu Ala Trp Ser Lys His Ala Asn Glu Leu Val Ser | | | |
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| Thr His Gly Tyr Ser Gln Asn Gln Ile Leu Val Trp Lys Tyr Pro Ser | | | |
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| Leu Thr Gln Val Ala Lys Leu Thr Gly His Ser Tyr Arg Val Leu Tyr | | | |

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| His | Thr | Gly | Thr | Ser | His | Pro | Pro | Arg | Phe | Gly | Leu | Ala | Glu | Thr | Ser |

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| Ser Gln Glu Glu Phe Leu Asp Gly Val Leu Met Ser Ala Glu Asn Ser | | |
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<211> 1096

<212> PRT

<213> Homo sapiens

<400> 6034

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Asp | Lys | Asp | Arg | Leu | Lys | Asn | Leu | Asp | Glu | Gln | Leu | Ser | Ala | Pro |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Arg | Lys | Asp | Val | Lys | Gln | Pro | Glu | Glu | Leu | Pro | Pro | Ile | Thr | Thr | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Thr | Ser | Thr | Thr | Pro | Ala | Thr | Asn | Thr | Thr | Cys | Thr | Ala | Thr | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Pro | Gln | Pro | Gln | Tyr | Ser | Tyr | His | Asp | Ile | Asn | Val | Tyr | Ser | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ala | Gly | Leu | Ala | Pro | His | Ile | Thr | Leu | Asn | Pro | Thr | Ile | Pro | Leu | Phe |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gln | Ala | His | Pro | Gln | Leu | Lys | Gln | Cys | Val | Arg | Gln | Ala | Ile | Glu | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Val | Gln | Glu | Leu | Val | His | Pro | Val | Val | Asp | Arg | Ser | Ile | Lys | Ile |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Met | Thr | Thr | Cys | Glu | Gln | Ile | Val | Arg | Lys | Asp | Phe | Ala | Leu | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Glu | Glu | Ser | Arg | Met | Arg | Ile | Ala | Ala | His | His | Met | Met | Arg | Asn |
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| Leu | Thr | Ala | Gly | Met | Ala | Met | Ile | Thr | Cys | Arg | Glu | Pro | Leu | Leu | Met |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Ile | Ser | Thr | Asn | Leu | Lys | Asn | Ser | Phe | Ala | Ser | Ala | Leu | Arg | Thr |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ala | Ser | Pro | Gln | Gln | Arg | Glu | Met | Met | Asp | Gln | Ala | Ala | Ala | Gln | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ala | Gln | Asp | Asn | Cys | Glu | Leu | Ala | Cys | Cys | Phe | Ile | Gln | Lys | Thr | Ala |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Val | Glu | Lys | Ala | Gly | Pro | Glu | Met | Asp | Lys | Arg | Leu | Ala | Thr | Glu | Phe |

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 Lys Val Gly Gly Val Asp Pro Lys Gln Leu Ala Val Tyr Glu Glu Phe
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 Thr Gly Phe Leu Ala Gln Pro Met Lys Gln Ala Trp Ala Thr Asp Asp
 305 310 315 320
 Val Ala Gln Ile Tyr Asp Lys Cys Ile Thr Glu Leu Glu Gln His Leu
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 His Ala Ile Pro Pro Thr Leu Ala Met Asn Pro Gln Ala Gln Ala Leu
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 355 360 365
 Ile Ala Ala Leu Gly Leu Leu Gln Lys Ala Val Glu Gly Leu Leu Asp
 370 375 380
 Ala Thr Ser Gly Ala Asp Ala Asp Leu Leu Leu Arg Tyr Arg Glu Cys
 385 390 395 400
 His Leu Leu Val Leu Lys Ala Leu Gln Asp Gly Arg Ala Tyr Gly Ser
 405 410 415
 Pro Trp Cys Asn Lys Gln Ile Thr Arg Cys Leu Ile Glu Cys Arg Asp
 420 425 430
 Glu Tyr Lys Tyr Asn Val Glu Ala Val Glu Leu Leu Ile Arg Asn His
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 450 455 460
 Asn Gly Leu Asn Tyr Met Ala Val Ala Phe Ala Met Gln Leu Val Lys
 465 470 475 480
 Ile Leu Leu Val Asp Glu Arg Ser Val Ala His Val Thr Glu Ala Asp
 485 490 495
 Leu Phe His Thr Ile Glu Thr Leu Met Arg Ile Asn Ala His Ser Arg
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 Gly Asn Ala Pro Glu Gly Leu Pro Gln Leu Met Glu Val Val Arg Ser
 515 520 525
 Asn Tyr Glu Ala Met Ile Asp Arg Ala His Gly Gly Pro Asn Phe Met
 530 535 540
 Met His Ser Gly Ile Ser Gln Ala Ser Glu Tyr Asp Asp Pro Pro Gly
 545 550 555 560
 Leu Arg Glu Lys Ala Glu Tyr Leu Leu Arg Glu Trp Val Asn Leu Tyr
 565 570 575
 His Ser Ala Ala Ala Gly Arg Asp Ser Thr Lys Ala Phe Ser Ala Phe
 580 585 590
 Val Gly Gln Val Glu Leu Leu Glu Arg Lys Met His Gln Gln Gly Ile
 595 600 605
 Leu Lys Thr Asp Asp Leu Ile Thr Arg Phe Phe Arg Leu Cys Thr Glu
 610 615 620
 Met Cys Val Glu Ile Ser Tyr Arg Ala Gln Ala Glu Gln Gln His Asn
 625 630 635 640
 Pro Ala Ala Asn Pro Thr Met Ile Arg Ala Lys Cys Tyr His Asn Leu
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 Asp Ala Phe Val Arg Leu Ile Ala Leu Leu Val Lys His Ser Gly Glu

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 740 745 750
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 770 775 780
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 Asn Val Glu Leu Thr Lys Pro Met Gln Ile Leu Tyr Lys Gly Thr Leu
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 835 840 845
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 850 855 860
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 Ala Pro Arg Ile Leu Thr Asn Phe Thr Gly Val Met Pro Pro Gln Phe
 885 890 895
 Lys Lys Asp Leu Asp Ser Tyr Leu Lys Thr Arg Ser Pro Val Thr Phe
 900 905 910
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 Gln Ala Ile Ala His Ile His Asn Lys Gly Ser Thr Pro Ser Met Ser
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 965 970 975
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 995 1000 1005
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 1010 1015 1020
 Thr Arg Val Leu Leu Glu Arg Leu Ile Val Asn Arg Pro His Pro Trp
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 Gly Leu Leu Ile Thr Phe Ile Glu Leu Ile Lys Asn Pro Ala Phe Lys
 1045 1050 1055
 Phe Trp Asn His Glu Phe Val His Cys Ala Pro Glu Ile Glu Lys Leu
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1090

1095

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<211> 320

<212> DNA

<213> Homo sapiens

<400> 6035

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<210> 6036

<211> 102

<212> PRT

<213> Homo sapiens

<400> 6036

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 Arg Gln Val Leu Gln Glu Pro Ser Arg Glu Pro Pro Gly Trp Leu Gly
 35 40 45
 Ala Trp Pro Arg Ser Gln Ser His Asn Ala His His Cys Pro Thr Met
 50 55 60
 Pro Phe Arg Met Glu Pro Leu Ile His Trp Ala His Ser His Gly Gln
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<210> 6037

<211> 3910

<212> DNA

<213> Homo sapiens

<400> 6037

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<211> 214

<212> PRT

<213> Homo sapiens

<400> 6038

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 His Gly Gly Thr Cys Ser Arg Gln Glu Leu Gly Val Ser Asp Val Leu
 35 40 45
 Gly Tyr Val His Pro Asp Leu Leu Lys Asp Phe Cys Met Asn Pro Gln
 50 55 60
 Thr Val Leu Leu Leu Arg Val Ile Ala Ala Phe Cys Phe Leu Gly Ile
 65 70 75 80
 Leu Cys Ser Leu Ser Ala Phe Leu Leu Asp Val Phe Gly Pro Lys His
 85 90 95
 Pro Ala Leu Lys Ile Thr Arg Arg Tyr Ala Phe Ala His Ile Leu Thr
 100 105 110
 Val Leu Gln Cys Ala Thr Val Ile Gly Phe Ser Tyr Trp Ala Ser Glu
 115 120 125
 Leu Ile Leu Ala Gln Gln Gln Gln His Lys Lys Tyr His Gly Ser Gln
 130 135 140
 Val Tyr Val Thr Phe Ala Val Ser Phe Tyr Leu Val Ala Gly Ala Gly
 145 150 155 160
 Gly Ala Ser Ile Leu Ala Thr Ala Ala Asn Leu Leu Arg His Tyr Pro
 165 170 175
 Thr Glu Glu Glu Glu Gln Ala Leu Glu Leu Leu Ser Glu Met Glu Glu
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 195 200 205
 Pro Pro Ala Tyr Thr Pro
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<210> 6039
 <211> 1130
 <212> DNA
 <213> Homo sapiens

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<210> 6040
 <211> 312
 <212> PRT
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<400> 6040
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 Gln Asn Val Val Pro Glu Ala Glu Gly Glu Asp Asp Pro Ala Gly Glu
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 Ala Gln Ala Gly Arg Leu Pro Leu Leu Pro Cys Ala Arg Ala Tyr Val
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 Ser Pro Arg Ala Pro Phe Tyr Arg Pro Leu Ala Pro Glu Leu Arg Ala
 85 90 95
 Arg Gln Leu Glu Leu Gly Ala Glu His Ala Leu Leu Leu Asp Ala Ala
 100 105 110
 Gly Gln Val Phe Ser Trp Gly Gly Gly Arg His Gly Gln Leu Gly His
 115 120 125
 Gly Thr Leu Glu Ala Glu Leu Glu Pro Arg Leu Leu Glu Ala Leu Gln
 130 135 140
 Gly Leu Val Met Ala Glu Val Ala Ala Gly Gly Trp His Ser Val Cys
 145 150 155 160
 Val Ser Glu Thr Gly Asp Ile Tyr Ile Trp Gly Trp Asn Glu Ser Gly
 165 170 175
 Gln Leu Ala Leu Pro Thr Arg Asn Leu Ala Glu Asp Gly Glu Thr Val
 180 185 190
 Ala Arg Glu Ala Thr Glu Leu Asn Glu Asp Gly Ser Gln Val Lys Arg
 195 200 205
 Thr Gly Gly Ala Glu Asp Gly Ala Pro Ala Pro Phe Ile Ala Val Gln
 210 215 220
 Pro Phe Pro Ala Leu Leu Asp Leu Pro Met Gly Ser Asp Ala Val Lys
 225 230 235 240
 Ala Ser Cys Gly Ser Arg His Thr Ala Val Val Thr Arg Thr Gly Glu
 245 250 255
 Leu Tyr Thr Trp Gly Trp Gly Lys Tyr Gly Gln Leu Gly His Glu Asp
 260 265 270
 Thr Thr Ser Leu Asp Arg Pro Arg Arg Val Glu Tyr Phe Val Asp Lys
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<210> 6041

<211> 291

<212> DNA

<213> Homo sapiens

<400> 6041

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<210> 6042
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 6042
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 Arg Arg Ile Glu Glu Glu Arg Leu Arg Leu Glu Gln Gln Lys Gln Gln
 35 40 45
 Ile Met Ala Ala Leu Asn Ser Gln Thr Ala Val Gln Phe Gln Gln Tyr
 50 55 60
 Ala Ala Gln Gln Tyr Pro Gly Asn Tyr Glu Gln Gln Gln Ile Leu Ile
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 Arg Gln Leu Gln Glu Gln His Tyr Gln Gln Tyr Met Gln Gln Leu Tyr
 85 90 95
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<210> 6043
 <211> 558
 <212> DNA
 <213> Homo sapiens

<400> 6043
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 180
 ctcttgcccc agcacagggg cggtgccacc cacattcggc ccgggtcttg cctaatacat
 240
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 300
 ggaateccaca cccccgcccc acccctctcg ggacacggat tcaatgtccc tgggtgggtca
 360
 tctggccttt tcggcctgtg atgtgattcg agcggtgcta tctttaacct cgggcagggg
 420
 tgttctcccc cgtcgacgtt gctcagataa cagtccctgca attccatggg ggtggcggca
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 558

<210> 6044
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 6044

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Met Leu Cys Gln Thr Pro Gly Ala Ala Thr Pro Met Glu Leu Gln Asp
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Cys Tyr Leu Ser Asn Val Asp Gly Gly Glu His Pro Cys Pro Arg Leu
      20             25             30
Lys Ile Ala Pro Leu Glu Ser His His Arg Pro Lys Arg Pro Asp Asp
      35             40             45
Pro Pro Gly Thr Leu Asn Pro Cys Pro Glu Arg Gly Gly Ala Gly Val
      50             55             60
Trp Ile Pro Ala Gly Ser Phe Gly Thr Gly Lys Asn Arg Gly Cys Ser
65             70             75             80
Asp Arg Val Phe Thr Lys Thr Cys Ile Arg Gln Asp Pro Gly Arg Met
      85             90             95
Trp Val Ala Pro Pro Leu Cys Trp Ala Arg Arg Met Cys Pro His Arg
      100            105            110
Ser Gln Ile Leu Phe Pro Gln Trp Val Val Gln Asp Thr Leu Asn Phe
      115            120            125
Cys Met Asn Trp Asp Ile Gln Asn Ser Leu Glu Gln Pro Pro Pro Ser
      130            135            140
Thr Leu Cys Leu Asp Ile Ser Tyr
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<210> 6043

<211> 1916

<212> DNA

<213> Homo sapiens

<400> 6045

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300
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420
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600
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660
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720
agtgaggaag actacttcag cagccacagg gacgagctcc agagcagaaa ggccattgac
780

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gctgccactc aaacagagcc aggagaggag atgccagggc tgagtgtgag tgagggtggga
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 900
 gcaagctctc aaaccacgat ttggtccaga tcgaccacta ctcagactga catggatgag
 960
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 1020
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 1080
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 1320
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 1560
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 1620
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 1680
 aagattataa tactgtatct ttactatacc ttttctgtgt ttagatacaa ataccattat
 1740
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 1800
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 1860
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 1916

<210> 6046

<211> 457

<212> PRT

<213> Homo sapiens

<400> 6046

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Val | Glu | Thr | His | Phe | Gln | Pro | Arg | Gly | Ala | Gly | Glu | Gly | Gly |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Pro | Tyr | Gly | Cys | Lys | Asp | Ala | Leu | Arg | Gln | Gln | Leu | Arg | Ser | Ala | Arg |
| | | | 20 | | | | 25 | | | | 30 | | | | |
| Glu | Val | Ile | Ala | Val | Val | Met | Asp | Val | Phe | Thr | Asp | Ile | Asp | Ile | Phe |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Asp | Leu | Gln | Glu | Ile | Cys | Arg | Lys | Gln | Gly | Val | Ala | Val | Tyr | Ile |
| | 50 | | | | 55 | | | | 60 | | | | | | |
| Leu | Leu | Asp | Gln | Ala | Leu | Leu | Ser | Gln | Phe | Leu | Asp | Met | Cys | Met | Asp |

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65          70          75          80
Leu Lys Val His Pro Glu Gln Glu Lys Leu Met Thr Val Arg Thr Ile
      85          90          95
Thr Gly Asn Ile Tyr Tyr Ala Arg Ser Gly Thr Lys Ile Ile Gly Lys
      100         105         110
Val His Glu Lys Phe Thr Leu Ile Asp Gly Ile Arg Val Ala Thr Gly
      115         120         125
Ser Tyr Ser Phe Thr Trp Thr Asp Gly Lys Leu Asn Ser Ser Asn Leu
      130         135         140
Val Ile Leu Ser Gly Gln Val Val Glu His Phe Asp Leu Glu Phe Arg
      145         150         155         160
Ile Leu Tyr Ala Gln Ser Lys Pro Ile Ser Pro Lys Leu Leu Ser His
      165         170         175
Phe Gln Ser Ser Asn Lys Phe Asp His Leu Thr Asn Arg Lys Pro Gln
      180         185         190
Ser Lys Glu Leu Thr Leu Gly Asn Leu Leu Arg Met Arg Leu Ala Arg
      195         200         205
Leu Ser Ser Thr Pro Arg Lys Ala Asp Leu Asp Pro Glu Met Pro Ala
      210         215         220
Glu Gly Lys Ala Glu Arg Lys Pro His Asp Cys Glu Ser Ser Thr Val
      225         230         235         240
Ser Glu Glu Asp Tyr Phe Ser Ser His Arg Asp Glu Leu Gln Ser Arg
      245         250         255
Lys Ala Ile Asp Ala Ala Thr Gln Thr Glu Pro Gly Glu Glu Met Pro
      260         265         270
Gly Leu Ser Val Ser Glu Val Gly Thr Gln Thr Ser Ile Thr Thr Ala
      275         280         285
Cys Ala Gly Thr Gln Thr Ala Val Ile Thr Arg Ile Ala Ser Ser Gln
      290         295         300
Thr Thr Ile Trp Ser Arg Ser Thr Thr Thr Gln Thr Asp Met Asp Glu
      305         310         315         320
Asn Ile Leu Phe Pro Arg Gly Thr Gln Ser Thr Glu Gly Ser Pro Val
      325         330         335
Ser Lys Met Ser Val Ser Arg Ser Ser Ser Leu Lys Ser Ser Ser Ser
      340         345         350
Val Ser Ser Gln Gly Ser Val Ala Ser Ser Thr Gly Ser Pro Ala Ser
      355         360         365
Ile Arg Thr Thr Asp Phe His Asn Pro Gly Tyr Pro Lys Tyr Leu Gly
      370         375         380
Thr Pro His Leu Glu Leu Tyr Leu Ser Asp Ser Leu Arg Asn Leu Asn
      385         390         395         400
Lys Glu Arg Gln Phe His Phe Ala Gly Ile Arg Ser Arg Leu Asn His
      405         410         415
Met Leu Ala Met Leu Ser Arg Arg Thr Leu Phe Thr Glu Asn His Leu
      420         425         430
Gly Leu His Ser Gly Asn Phe Ser Arg Val Asn Leu Leu Ala Val Arg
      435         440         445
Asp Val Ala Leu Tyr Pro Ser Tyr Gln
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<210> 6047

<211> 773

<212> DNA

<213> Homo sapiens

<400> 6047

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 240
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 aatggtgcaa acagctcttc tccagtgtgg tccccgtgct gctgggggac ccagaggagg
 360
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 660
 tgggcccaga ggtgcccccg gcttcctcgg ccatgaccca cctctctgga cacagccgct
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<210> 6048

<211> 129

<212> PRT

<213> Homo sapiens

<400> 6048

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 Gly Thr Thr Leu Glu Lys Ser Cys Leu His His Cys Ser Gly Gly Gly
 35 40 45
 His Leu Pro Ser Ala Cys Leu Gly Ala Arg Arg Ser Ser Ser Leu Leu
 50 55 60
 Gly Tyr Gly Ser Cys Arg Asp Thr Gln Ser Trp Thr Pro Asp Pro Leu
 65 70 75 80
 Pro His Pro Pro Ser Leu Ser Pro Gln Ser Leu Leu Tyr Ser Gln Ala
 85 90 95
 Met Arg Ser Pro Ile Ser His Gln Glu Leu Thr Arg Pro Leu Gly Lys
 100 105 110
 Glu Ala Ala Arg Arg Arg Cys Gly His Thr Val Ala Leu Ser Ala Arg
 115 120 125
 Asp

<210> 6049
 <211> 479
 <212> DNA
 <213> Homo sapiens

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 120
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 180
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 300
 gaagacaccc tggagtttgt agggtttgat gcgaagatgg ctgaggaatc ctctctctcc
 360
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<210> 6050
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 6050
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 Ala Lys Lys Arg Lys Leu Asn Ser Ser Ser Ser Ser Ser Ser Asn Ser
 35 40 45
 Ser Asn Glu Arg Glu Asp Phe Asp Ser Thr Ser Ser Ser Ser Ser Thr
 50 55 60
 Pro Pro Leu Gln Pro Arg Asp Ser Ala Ser Pro Ser Thr Ser Ser Phe
 65 70 75 80
 Cys Leu Gly Val Ser Val Ala Ala Ser Ser His Val Pro Ile Gln Lys
 85 90 95
 Lys Leu Arg Phe Glu Asp Thr Leu Glu Phe Val Gly Phe Asp Ala Lys
 100 105 110
 Met Ala Glu Glu Ser Ser Ser Ser Ser Ser Ser Ser Pro Thr Ala
 115 120 125
 Ala Thr Ser Gln Glu Gln Gln Leu Lys Asn Lys Ser Ile Leu Ile Ser
 130 135 140
 Ser Val Gly Ser Val His His Ala Asp Gly Leu Ala Glu Ser Ser
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<210> 6051
 <211> 2404
 <212> DNA
 <213> Homo sapiens

<400> 6051

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180
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240
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300
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360
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720
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780
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1080
gaaaagcata gaaaatttgt tgatgttgca cagagcactt atgactatgg caggcagttg
1140
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1380
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 1860
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 1920
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 1980
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 2160
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 2280
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 2404

<210> 6052

<211> 518

<212> PRT

<213> Homo sapiens

<400> 6052

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| Ile | Asn | Asn | Gly | Ser | Asp | Lys | Gly | Asn | Gln | Gln | Glu | Lys | Glu | Arg | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Asp | Leu | Asn | Phe | Leu | Pro | Ser | Val | Asp | Pro | Glu | Thr | Val | Leu | Gln |
| | | | 20 | | | | | | 25 | | | | 30 | | |
| Thr | Gly | His | Glu | Leu | Leu | Ser | Glu | Leu | Gln | Gln | Arg | Arg | Phe | Asn | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Asp | Gly | Gly | Val | Ser | Trp | Ser | Pro | Met | Asp | Asp | Glu | Leu | Leu | Ala |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Gln | Pro | Gln | Val | Met | Lys | Leu | Leu | Asp | Ser | Leu | Arg | Glu | Gln | Tyr | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Arg | Tyr | Gln | Glu | Val | Cys | Arg | Gln | Arg | Ser | Lys | Arg | Thr | Gln | Leu | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Ile | Gln | Gln | Lys | Val | Met | Gln | Val | Val | Asn | Trp | Leu | Glu | Gly | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Ser | Glu | Gln | Leu | Arg | Ala | Gln | Trp | Gly | Ile | Gly | Asp | Ser | Ile | Arg |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Ala | Ser | Gln | Ala | Leu | Gln | Gln | Lys | His | Glu | Glu | Ile | Glu | Ser | Gln | His |

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 130 | | 135 | | 140 | |
| Ser Glu Trp Phe Ala Val Tyr Val Glu Leu Asn Gln Gln Ile Ala Ala | | | | | |
| 145 | | 150 | | 155 | 160 |
| Leu Leu Asn Ala Gly Asp Glu Glu Asp Leu Val Glu Leu Lys Ser Leu | | | | | |
| | 165 | | 170 | | 175 |
| Gln Gln Gln Leu Ser Asp Val Cys Tyr Arg Gln Ala Ser Gln Leu Glu | | | | | |
| | 180 | | 185 | | 190 |
| Phe Arg Gln Asn Leu Leu Gln Ala Ala Leu Glu Phe His Gly Val Ala | | | | | |
| | 195 | | 200 | | 205 |
| Gln Asp Leu Ser Gln Gln Leu Asp Gly Leu Leu Gly Met Leu Cys Val | | | | | |
| | 210 | | 215 | | 220 |
| Asp Val Ala Pro Ala Asp Gly Ala Ser Ile Gln Gln Thr Leu Lys Leu | | | | | |
| | 225 | | 230 | | 235 |
| Leu Glu Glu Lys Leu Lys Ser Val Asp Val Gly Leu Gln Gly Leu Arg | | | | | |
| | 245 | | 250 | | 255 |
| Glu Lys Gly Gln Gly Leu Leu Asp Gln Ile Ser Asn Gln Ala Ser Xaa | | | | | |
| | 260 | | 265 | | 270 |
| Gly Pro Met Glu Arg Met Xaa Thr Ile Glu Asn Lys Glu Asn Val Asp | | | | | |
| | 275 | | 280 | | 285 |
| His Ile Gln Gly Val Met Glu Asp Met Gln Leu Arg Lys Gln Arg Cys | | | | | |
| | 290 | | 295 | | 300 |
| Glu Asp Met Val Asp Val Arg Arg Leu Lys Met Leu Gln Met Val Gln | | | | | |
| | 305 | | 310 | | 315 |
| Leu Phe Lys Cys Glu Glu Asp Ala Ala Lys Ala Val Glu Trp Leu Ser | | | | | |
| | 325 | | 330 | | 335 |
| Glu Leu Leu Asp Ala Leu Leu Lys Thr His Ile Arg Leu Gly Asp Asp | | | | | |
| | 340 | | 345 | | 350 |
| Ala Gln Glu Thr Lys Val Leu Leu Glu Lys His Arg Lys Phe Val Asp | | | | | |
| | 355 | | 360 | | 365 |
| Val Ala Gln Ser Thr Tyr Asp Tyr Gly Arg Gln Leu Leu Gln Ala Thr | | | | | |
| | 370 | | 375 | | 380 |
| Val Val Leu Cys Gln Ser Leu Arg Cys Thr Ser Arg Ser Ser Gly Asp | | | | | |
| | 385 | | 390 | | 395 |
| Thr Leu Pro Arg Leu Asn Arg Val Trp Lys Gln Phe Thr Ile Ala Ser | | | | | |
| | 405 | | 410 | | 415 |
| Glu Glu Arg Val His Arg Leu Glu Met Ala Ile Ala Phe His Ser Asn | | | | | |
| | 420 | | 425 | | 430 |
| Ala Glu Lys Ile Leu Gln Asp Cys Pro Glu Glu Pro Glu Ala Ile Asn | | | | | |
| | 435 | | 440 | | 445 |
| Asp Glu Glu Gln Phe Asp Glu Ile Glu Ala Val Gly Lys Ser Leu Leu | | | | | |
| | 450 | | 455 | | 460 |
| Asp Arg Leu Thr Val Pro Val Val Tyr Pro Asp Gly Thr Glu Gln Tyr | | | | | |
| | 465 | | 470 | | 475 |
| Phe Gly Ser Pro Ser Asp Met Ala Ser Thr Ala Glu Asn Ile Arg Asp | | | | | |
| | 485 | | 490 | | 495 |
| Arg Met Lys Leu Val Asn Leu Lys Arg Gln Gln Leu Arg His Pro Glu | | | | | |
| | 500 | | 505 | | 510 |
| Met Val Thr Thr Glu Ser | | | | | |
| | 515 | | | | |

<210> 6053

<211> 3257

<212> DNA

<213> Homo sapiens

<400> 6053
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 120
 ttgggtctcc gtgggtcagg ccggctcccc cttcctgggc tcccttctcc cgctgggccc
 180
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| Ile | Ser | Tyr | Thr | Ile | Thr | Ile | Phe | Gly | Asn | Val | Ser | Ile | Met | Met | Val |
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| Asn | Leu | Ser | Ile | Leu | Asp | Leu | Cys | Tyr | Thr | Thr | Thr | Thr | Val | Pro | His |
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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

<400> 6062

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<213> Homo sapiens

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| Gly | Arg | Gly | Ala | Ala | Val | Cys | Ala | Tyr | Val | Arg | Met | Val | Phe | Leu | Ala |
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| Asp | Gln | Val | Ser | Ala | Cys | Ile | Pro | Val | Phe | Arg | Leu | Ala | Arg | Arg | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Lys | Ile | Leu | Phe | Tyr | Cys | His | Phe | Pro | Asp | Leu | Leu | Leu | Thr | Lys |

| | | | | | | | | | | | | | | | |
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| Arg | Asp | Ser | Phe | Leu | Lys | Arg | Leu | Tyr | Arg | Ala | Pro | Ile | Asp | Trp | Ile |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Glu | Glu | Tyr | Thr | Thr | Gly | Met | Ala | Asp | Cys | Ile | Leu | Val | Asn | Ser | Gln |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Phe | Thr | Ala | Ala | Val | Phe | Lys | Glu | Thr | Phe | Lys | Ser | Leu | Ser | His | Ile |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Asp | Pro | Asp | Val | Leu | Tyr | Pro | Ser | Leu | Asn | Val | Thr | Ser | Phe | Asp | Ser |
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<211> 2084

<212> DNA

<213> Homo sapiens

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<210> 6066

<211> 80

<212> PRT

<213> Homo sapiens

<400> 6066

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Ala | Ile | Arg | Glu | Ser | Ala | Lys | Val | Val | Asp | Gln | Ala | Gln | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Val | Leu | Arg | Gly | Val | Asp | Asp | Leu | Asp | Phe | Phe | Ile | Gly | Asp | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Ile | Asp | Lys | Pro | Thr | Tyr | Ala | Thr | Lys | Trp | Pro | Ile | Arg | His | Gly |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ile | Ile | Glu | Asp | Trp | Asp | Leu | Met | Glu | Arg | Phe | Met | Glu | Gln | Val | Val |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Phe | Lys | Tyr | Leu | Arg | Ala | Glu | Pro | Glu | Asp | His | Tyr | Phe | Leu | Met | Gly |
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<210> 6067

<211> 406

<212> DNA

<213> Homo sapiens

<400> 6067

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<210> 6068

<211> 117

<212> PRT

<213> Homo sapiens

<400> 6068

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35     40     45
Ser Arg Ser Ser Glu Pro Pro Ala Cys Pro Arg His Trp Pro Cys Pro
50     55     60
Pro Gly Leu Pro Phe Gly Gln Gly Ala Val Ala Arg Ala Ala Pro Cys
65     70     75     80
Pro Ala Tyr Ser His Ser Ala Val Gly Arg Pro Pro Leu Pro Arg Lys
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<210> 6069

<211> 456

<212> DNA

<213> Homo sapiens

<400> 6069

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180

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<210> 6070

<211> 148

<212> PRT

<213> Homo sapiens

<400> 6070

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Val | Lys | Gln | Ile | Ile | Pro | Met | Val | Thr | Glu | Leu | Ile | Gly | Arg | Ser |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| His | Arg | Tyr | His | Arg | Lys | Glu | Asn | Leu | Glu | Tyr | Cys | Ile | Met | Val | Ile |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Gly | Val | Pro | Asn | Val | Gly | Lys | Ser | Ser | Leu | Ile | Asn | Ser | Leu | Arg | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | His | Leu | Arg | Lys | Gly | Lys | Ala | Thr | Arg | Val | Gly | Gly | Glu | Pro | Gly |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ile | Thr | Arg | Ala | Val | Met | Ser | Lys | Ile | Gln | Val | Glu | Ser | Ser | Gly | Ala |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Arg | Pro | Ser | Thr | Leu | Ser | Arg | Ala | Leu | Gln | Ala | Ser | Gly | Thr | Cys | Arg |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Pro | Leu | Cys | Gly | Phe | Arg | Leu | Leu | Thr | Thr | Leu | Pro | Ser | Pro | Pro | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Val | Pro | Ala | Glu | His | Pro | Arg | Gly | Arg | His | Cys | Pro | Ala | Leu | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
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<210> 6071

<211> 2633

<212> DNA

<213> Homo sapiens

<400> 6071

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<211> 76

<212> PRT

<213> Homo sapiens

<400> 6072

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| Met | Ala | Gln | Ala | Arg | Arg | His | Met | Leu | Val | Ile | Ser | Ala | Arg | Trp | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Glu | Ala | Gly | Gly | Ser | Phe | Glu | Val | Arg | Ser | Ser | Arg | Pro | Ala | Trp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Thr | Trp | Arg | Asn | Pro | Ile | Ser | Thr | Lys | Asn | Thr | Lys | Ile | Asn | Lys |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ala | Trp | Trp | Arg | Val | Pro | Val | Val | Pro | Ala | Thr | Arg | Glu | Ala | Glu | Ala |
| | 50 | | | | 55 | | | | | | 60 | | | | |
| Gly | Glu | Ser | Leu | Glu | Pro | Gly | Arg | Arg | Arg | Phe | Gln | | | | |
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<210> 6073

<211> 387

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<213> Homo sapiens

<400> 6073

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<210> 6074

<211> 69

<212> PRT

<213> Homo sapiens

<400> 6074

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Gly | Leu | Cys | Thr | Ala | Ser | Phe | Pro | Pro | His | Leu | Ser | Pro | Ala | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Pro | Thr | Gly | Pro | Phe | Ser | Pro | Arg | Met | Lys | Pro | Ala | Gly | Ser | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Asp | Met | Ala | Leu | Asp | Ala | Phe | Asp | Leu | Asp | Arg | Met | Lys | Gln | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Leu | Glu | Glu | Val | | | | | | | | | | | |
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<212> DNA

<213> Homo sapiens

<400> 6075

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<210> 6076

<211> 601

<212> PRT

<213> Homo sapiens

<400> 6076

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| Met | Ala | Gln | Lys | Lys | Tyr | Leu | Gln | Ala | Lys | Leu | Thr | Gln | Phe | Leu | Arg |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| Glu | Asp | Arg | Ile | Gln | Leu | Trp | Lys | Pro | Pro | Tyr | Thr | Glu | Glu | Asn | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Gly | Leu | Ala | Leu | Lys | Asp | Leu | Ala | Lys | Gln | Tyr | Ser | Asp | Arg |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Glu | Cys | Cys | Glu | Asn | Glu | Val | Glu | Lys | Val | Ile | Glu | Glu | Ile | Arg |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Cys | Lys | Ala | Ile | Glu | Arg | Gly | Thr | Gly | Asn | Asp | Asn | Tyr | Arg | Thr | Thr |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Gly | Ile | Ala | Thr | Ile | Glu | Val | Phe | Leu | Pro | Pro | Arg | Leu | Lys | Lys | Asp |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Lys | Asn | Leu | Leu | Glu | Thr | Arg | Leu | His | Ile | Thr | Gly | Arg | Glu | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Ser | Lys | Ile | Ala | Glu | Thr | Phe | Gly | Leu | Gln | Glu | Asn | Tyr | Ile | Lys |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Ile | Val | Ile | Asn | Lys | Lys | Gln | Leu | Gln | Leu | Gly | Lys | Thr | Leu | Glu | Glu |
| | | | 130 | | | 135 | | | | 140 | | | | | |
| Gln | Gly | Val | Ala | His | Asn | Val | Lys | Ala | Met | Val | Leu | Glu | Leu | Lys | Gln |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Glu | Glu | Asp | Ala | Arg | Lys | Asn | Phe | Gln | Leu | Glu | Glu | Glu | Glu | Gln |

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|-----|--|--|
| | | | | | | | | | | | | | 165 | | | 170 | | | 175 | | |
| Asn | Glu | Ala | Lys | Leu | Lys | Glu | Lys | Gln | Ile | Gln | Arg | Thr | Lys | Arg | Gly | | | | | | |
| | | | | 180 | | | | | 185 | | | | | 190 | | | | | | | |
| Leu | Glu | Ile | Leu | Ala | Lys | Arg | Ala | Ala | Glu | Thr | Val | Val | Asp | Pro | Glu | | | | | | |
| | | | | 195 | | | | | 200 | | | | | 205 | | | | | | | |
| Met | Thr | Pro | Tyr | Leu | Asp | Ile | Ala | Asn | Gln | Thr | Gly | Arg | Ser | Ile | Arg | | | | | | |
| | | | | 210 | | | | | 215 | | | | | 220 | | | | | | | |
| Ile | Pro | Pro | Ser | Glu | Arg | Lys | Ala | Leu | Met | Leu | Ala | Met | Gly | Tyr | His | | | | | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | | | | | |
| Glu | Lys | Gly | Arg | Ala | Phe | Leu | Lys | Arg | Lys | Glu | Tyr | Gly | Ile | Ala | Leu | | | | | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | | | | | |
| Pro | Cys | Leu | Leu | Asp | Ala | Asp | Lys | Tyr | Phe | Cys | Glu | Cys | Cys | Arg | Glu | | | | | | |
| | | | | 260 | | | | | 265 | | | | | 270 | | | | | | | |
| Leu | Leu | Asp | Thr | Val | Asp | Asn | Tyr | Ala | Val | Leu | Gln | Leu | Asp | Ile | Val | | | | | | |
| | | | | 275 | | | | | 280 | | | | | 285 | | | | | | | |
| Trp | Cys | Tyr | Phe | Arg | Leu | Glu | Gln | Leu | Glu | Cys | Leu | Asp | Asp | Ala | Glu | | | | | | |
| | | | | 290 | | | | | 295 | | | | | 300 | | | | | | | |
| Lys | Lys | Leu | Asn | Leu | Ala | Gln | Lys | Cys | Phe | Lys | Asn | Cys | Tyr | Gly | Glu | | | | | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | | | | | |
| Asn | His | Gln | Arg | Leu | Val | His | Ile | Lys | Gly | Asn | Cys | Gly | Lys | Glu | Lys | | | | | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | | | | | |
| Val | Leu | Phe | Leu | Arg | Leu | Tyr | Leu | Leu | Gln | Gly | Ile | Arg | Asn | Tyr | His | | | | | | |
| | | | | 340 | | | | | 345 | | | | | 350 | | | | | | | |
| Ser | Gly | Asn | Asp | Val | Glu | Ala | Tyr | Glu | Tyr | Leu | Asn | Arg | His | Val | Ser | | | | | | |
| | | | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Ser | Leu | Lys | Ser | Tyr | Ile | Leu | Ile | His | Gln | Lys | Trp | Thr | Ile | Cys | Cys | | | | | | |
| | | | | 370 | | | | | 375 | | | | | 380 | | | | | | | |
| Ser | Trp | Gly | Leu | Leu | Pro | Arg | Lys | Xaa | Arg | Leu | Gly | Leu | Arg | Ala | Cys | | | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | | | |
| Asp | Gly | Asn | Val | Asp | His | Ala | Ala | Thr | His | Ile | Thr | Asn | Arg | Arg | Glu | | | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | | | |
| Glu | Leu | Ala | Gln | Ile | Arg | Lys | Glu | Glu | Lys | Glu | Lys | Lys | Arg | Arg | Arg | | | | | | |
| | | | | 420 | | | | | 425 | | | | | 430 | | | | | | | |
| Leu | Glu | Asn | Ile | Arg | Phe | Leu | Lys | Gly | Met | Gly | Tyr | Ser | Thr | His | Ala | | | | | | |
| | | | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Ala | Gln | Gln | Ile | Leu | Leu | Ser | Asn | Pro | Gln | Met | Trp | Trp | Leu | Asn | Asp | | | | | | |
| | | | | 450 | | | | | 455 | | | | | 460 | | | | | | | |
| Ser | Asn | Pro | Glu | Thr | Asp | Asn | Arg | Gln | Glu | Ser | Pro | Ser | Gln | Glu | Asn | | | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | | | |
| Ile | Asp | Arg | Leu | Val | Tyr | Met | Gly | Phe | Asp | Ala | Leu | Val | Ala | Glu | Ala | | | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | | | |
| Ala | Leu | Arg | Val | Phe | Arg | Gly | Asn | Val | Gln | Leu | Ala | Ala | Gln | Thr | Leu | | | | | | |
| | | | | 500 | | | | | 505 | | | | | 510 | | | | | | | |
| Ala | His | Asn | Gly | Gly | Ser | Leu | Pro | Pro | Glu | Leu | Pro | Leu | Ser | Pro | Glu | | | | | | |
| | | | | 515 | | | | | 520 | | | | | 525 | | | | | | | |
| Asp | Ser | Leu | Ser | Pro | Pro | Ala | Thr | Ser | Pro | Ser | Asp | Ser | Ala | Gly | Thr | | | | | | |
| | | | | 530 | | | | | 535 | | | | | 540 | | | | | | | |
| Ser | Ser | Ala | Ser | Thr | Asp | Glu | Asp | Met | Glu | Thr | Glu | Ala | Val | Asn | Glu | | | | | | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | | | | | | |
| Ile | Leu | Glu | Asp | Ile | Pro | Glu | His | Glu | Glu | Asp | Tyr | Leu | Asp | Ser | Thr | | | | | | |
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595

600

<210> 6077

<211> 2093

<212> DNA

<213> Homo sapiens

<400> 6077

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1380

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 1920
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 1980
 gaacctgtgc ctaatacacg caagggcgct gtcccgccca accccgcctt taaacgccac
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<210> 6078

<211> 213

<212> PRT

<213> Homo sapiens

<400> 6078

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| Arg | Pro | Gly | Arg | Ser | Pro | Gly | Ser | Gly | Arg | Ser | Arg | Ala | Val | Gly | Cys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Arg | Ala | Val | Ser | Gly | Gly | Ser | Gly | Asn | Arg | Ile | Lys | Ala | Arg | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Arg | Glu | Gly | Ala | Ser | Gly | Pro | Gly | Val | Gly | Pro | His | Ile | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Arg | Glu | Ala | Glu | Asp | Arg | Glu | Leu | Val | Thr | Met | Ala | Gly | Pro | Gln |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Pro | Leu | Ala | Leu | Gln | Leu | Glu | Gln | Leu | Leu | Asn | Pro | Arg | Pro | Ser | Glu |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Ala | Asp | Pro | Glu | Ala | Asp | Pro | Glu | Glu | Ala | Thr | Ala | Ala | Arg | Val | Ile |
| | | | 85 | | | | | | 90 | | | | 95 | | |
| Asp | Arg | Phe | Asp | Glu | Gly | Glu | Asp | Gly | Glu | Gly | Asp | Phe | Leu | Val | Val |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Gly | Ser | Ile | Arg | Lys | Leu | Ala | Ser | Ala | Ser | Leu | Leu | Asp | Thr | Asp | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Arg | Tyr | Cys | Gly | Lys | Thr | Thr | Ser | Arg | Lys | Ala | Trp | Asn | Glu | Asp | His |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Trp | Glu | Gln | Thr | Leu | Pro | Gly | Ser | Ser | Asp | Glu | Glu | Ile | Ser | Asp | Glu |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Glu | Gly | Ser | Gly | Asp | Glu | Asp | Ser | Glu | Gly | Leu | Gly | Leu | Glu | Glu | Tyr |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Asp | Glu | Asp | Asp | Leu | Gly | Ala | Ala | Glu | Glu | Gln | Glu | Cys | Gly | Asp | Gln |

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 Cys Pro Glu Tyr Gln
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 <211> 651
 <212> DNA
 <213> Homo sapiens

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 120
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 300
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 360
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 420
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 480
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 540
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<210> 6080
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 <212> PRT
 <213> Homo sapiens

<400> 6080
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 Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
 35 40 45
 Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
 50 55 60
 Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
 65 70 75 80
 Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
 85 90 95
 Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro

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          100          105          110
Met Lys Ser Val Leu Trp Trp Leu Pro Val Glu Lys Ala Phe Trp Arg
          115          120          125
Gln Pro Ala Gly Pro Gly Ser Gly Ile Arg Glu Arg Leu Glu His Pro
          130          135          140
Val Leu His Val Ser Trp Asn Asp Ala Arg Ala Tyr Cys Ala Trp Arg
145          150          155          160
Gly Lys

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<210> 6081
 <211> 655
 <212> DNA
 <213> Homo sapiens

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<400> 6081
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120
ggaccagctg ttataacatt gttactagat gaatgtccat tgcccactaa agatgcactc
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cagaaattga ctgaaattct caattttaa ggagaagtag cttgccagga ctcaagccat
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655

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<210> 6082
 <211> 218
 <212> PRT
 <213> Homo sapiens

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<400> 6082
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          20          25          30
Val Ile Pro Leu Glu Asp Pro Leu Gly Pro Ala Val Ile Thr Leu Leu
          35          40          45
Leu Asp Glu Cys Pro Leu Pro Thr Lys Asp Ala Leu Gln Lys Leu Thr
          50          55          60
Glu Ile Leu Asn Leu Asn Gly Glu Val Ala Cys Gln Asp Ser Ser His

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<400> 6084
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      20              25              30
Leu Ile Val Glu Gly His Leu Thr Lys Ala Val Glu Glu Thr Lys Leu
      35              40              45
Ser Lys Glu Asn Gln Thr Arg Ala Lys Glu Ser Asp Phe Ser Asp Thr
      50              55              60
Leu Ser Pro Ser Lys Glu Lys Ser Ser Asp Asp Thr Thr Asp Ala Gln

```

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 | | | | | | | | | |
| Met | Asp | Glu | Gln | Asp | Leu | Asn | Glu | Pro | Leu | Ala | Lys | Val | Ser | Leu | Leu |
| | | 85 | | | | 90 | | | | | | | | 95 | |
| Lys | Asp | Asp | Leu | Gln | | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | |

<210> 6085

<211> 2307

<212> DNA

<213> Homo sapiens

<400> 6085

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1140
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1200
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1260

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 6090

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 Pro Glu Leu His Thr Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu
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 785 790 795 800
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<211> 1336

<212> DNA

<213> Homo sapiens

<400> 6091

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| 35 | 40 | 45 | |
| Val Thr Arg Gln Val Pro Ser Pro Pro Ser Gly Phe Arg Leu Pro Ser | | | |
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| Gly Gln Gln Leu Gln Leu His Leu Leu Pro Ala Leu Lys Gly Ser Phe | | | |
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<210> 6094

<211> 136

<212> PRT

<213> Homo sapiens

<400> 6094

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| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Gln | Met | Gly | Ile | Tyr | Leu | Asp | Leu | Cys | Gly | Ser | Phe | Ser | Ala | Glu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Thr | Gly | Pro | Val | Ser | Gln | Ser | Phe | Leu | Gln | Met | Leu | Ile | Gly | Val | Cys |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Trp | Asn | Pro | Lys | Pro | Leu | Pro | Arg | Leu | Gln | Ala | Pro | Asp | Gly | Leu | Leu |
| | | | 50 | | | 55 | | | | 60 | | | | | |
| Ser | Cys | Asn | Phe | Leu | Gly | Glu | Glu | Thr | Phe | Ser | Ser | Phe | Pro | Phe | Leu |
| 65 | | | | 70 | | | | 75 | | | | | 80 | | |
| Val | His | Pro | Cys | Thr | Leu | Val | Leu | Ser | Gln | Pro | Leu | Pro | His | Ile | Val |

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| Pro | Asp | Ser | Arg | Gly | Thr | Ser | Ser | Leu | His | Arg | Ala | Ala | Ala | Ala | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Arg | Ala | Glu | Pro | Val | Gly | Ala | Glu | Ala | Leu | Ala | Pro | Glu | Val | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
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<212> DNA
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      35              40              45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Val Val Trp Gly Glu Cys
    50              55              60
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
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<210> 6097
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<212> DNA

<213> Homo sapiens

<400> 6097

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<211> 631

<212> PRT

<213> Homo sapiens

<400> 6098

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Leu | Phe | Arg | Gly | Leu | Gln | Asn | His | Pro | Met | Val | Leu | Pro | Ile | Cys | Ser |
| | | | 20 | | | | 25 | | | | | | 30 | | |
| Arg | Ser | Gly | Asp | Val | Ile | Glu | Tyr | Leu | Leu | Lys | Asn | Gln | Trp | Phe | Val |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Arg | Cys | Gln | Glu | Met | Gly | Ala | Arg | Ala | Ala | Lys | Ala | Val | Glu | Ser | Gly |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ala | Leu | Glu | Leu | Ser | Pro | Ser | Phe | His | Gln | Lys | Asn | Trp | Gln | His | Trp |
| 65 | | | | 70 | | | | 75 | | | | | | 80 | |
| Phe | Ser | His | Ile | Gly | Asp | Trp | Cys | Val | Ser | Arg | Gln | Leu | Trp | Trp | Gly |
| | | | 85 | | | | 90 | | | | | | 95 | | |
| His | Gln | Ile | Pro | Ala | Tyr | Leu | Val | Xaa | Xaa | Gly | Pro | Cys | Ala | Xaa | Gly |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Glu | Glu | Xaa | Thr | Cys | Trp | Val | Val | Gly | Arg | Ser | Gly | Ala | Glu | Ala | Arg |

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 Gln Leu Asp Ser Leu Thr Ala Arg Thr Pro Ser Glu Gly Glu Ala Gly
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 Thr Gln Arg Gln Gln Lys Leu Ser Ser Leu Gln Leu Glu Leu Ser Lys
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<211> 3957

<212> DNA

<213> Homo sapiens

<400> 6099

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<212> PRT

<213> Homo sapiens

<400> 6100

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| 65 | 70 | 75 |
| Lys Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asp Glu Glu Asn | | |
| 85 | 90 | 95 |
| Leu Lys Lys Ile Phe Arg Glu Val Gln Ile Met Lys Met Leu Cys His | | |
| 100 | 105 | 110 |
| Pro His Ile Ile Arg Leu Tyr Gln Val Met Glu Thr Glu Arg Met Ile | | |
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| Val Ala His Gly Arg Met Ala Glu Lys Glu Ala Arg Arg Lys Phe Lys | | |
| 145 | 150 | 155 |
| Gln Ile Val Thr Ala Val Tyr Phe Cys His Cys Arg Asn Ile Val His | | |
| 165 | 170 | 175 |
| Arg Asp Leu Lys Ala Glu Asn Leu Leu Asp Ala Asn Leu Asn Ile | | |
| 180 | 185 | 190 |
| Lys Ile Ala Asp Phe Gly Phe Ser Asn Leu Phe Thr Pro Gly Gln Leu | | |
| 195 | 200 | 205 |
| Leu Lys Thr Trp Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe | | |
| 210 | 215 | 220 |
| Glu Gly Lys Glu Tyr Asp Gly Pro Lys Val Asp Ile Trp Ser Leu Gly | | |
| 225 | 230 | 235 |
| Val Val Leu Tyr Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Ser | | |
| 245 | 250 | 255 |
| Thr Leu Gln Asn Leu Arg Ala Arg Val Leu Ser Gly Lys Phe Arg Ile | | |
| 260 | 265 | 270 |
| Pro Phe Phe Met Ser Thr Glu Cys Glu His Leu Ile Arg His Met Leu | | |
| 275 | 280 | 285 |
| Val Leu Asp Pro Asn Lys Arg Leu Ser Met Glu Gln Ile Cys Lys His | | |
| 290 | 295 | 300 |
| Lys Trp Met Lys Leu Gly Asp Ala Asp Pro Asn Phe Asp Arg Leu Ile | | |
| 305 | 310 | 315 |
| Ala Glu Cys Gln Gln Leu Lys Glu Glu Arg Gln Val Asp Pro Leu Asn | | |
| 325 | 330 | 335 |
| Glu Asp Val Leu Leu Ala Met Glu Asp Met Gly Leu Asp Lys Glu Gln | | |
| 340 | 345 | 350 |
| Thr Leu Gln Ala Glu Gln Ala Gly Thr Ala Met Asn Ile Ser Val Pro | | |
| 355 | 360 | 365 |
| Gln Val Gln Leu Ile Asn Pro Glu Asn Gln Ile Val Glu Pro Asp Gly | | |
| 370 | 375 | 380 |
| Thr Leu Asn Leu Asp Ser Asp Glu Gly Glu Glu Pro Ser Pro Glu Ala | | |
| 385 | 390 | 395 |
| Leu Val Arg Tyr Leu Ser Met Arg Arg His Thr Val Gly Val Ala Asp | | |
| 405 | 410 | 415 |
| Pro Arg Thr Glu Val Met Glu Asp Leu Gln Lys Leu Leu Pro Gly Phe | | |
| 420 | 425 | 430 |
| Pro Gly Val Asn Pro Gln Ala Pro Phe Leu Gln Val Ala Pro Asn Val | | |
| 435 | 440 | 445 |
| Asn Phe Met His Asn Leu Leu Pro Met Gln Asn Leu Gln Pro Thr Gly | | |
| 450 | 455 | 460 |
| Gln Leu Glu Tyr Lys Glu Gln Ser Leu Leu Gln Pro Pro Thr Leu Gln | | |

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465          470          475          480
Leu Leu Asn Gly Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly
          485          490          495
Ala Asn Ile Gln Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly
          500          505          510
Pro Ser Pro Leu Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro
          515          520          525
Val Asp Glu Glu Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln
          530          535          540
Ser Ser Thr Tyr Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg
545          550          555          560
Phe Ser Pro Val Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Gln Ala
          565          570          575
Phe Lys Ala His Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln
          580          585          590
Leu Gln Gln Glu Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile
          595          600          605
Asp Glu Arg Thr Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln
610          615          620
Gln Glu Gln His His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile
630          635          640
Cys Pro Pro Gln Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln
          645          650          655
Pro Ala Leu Leu Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser
          660          665          670
Ser Pro Pro Pro Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser
          675          680          685
Asn Ser Pro Pro Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala
690          695          700
Ala Ser Ser Ser Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe
705          710          715          720
Gln Gln Gln Pro Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr
          725          730          735
Cys Leu Gly Met Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln
          740          745          750
Val Gln Glu Pro Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala
          755          760          765
Gly Ser Ser Gly Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met
          770          775          780
Gln Met Gln His Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His
785          790          795          800
Arg Pro Leu Ser Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser
          805          810          815
Leu Asn Val Asn Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu
          820          825          830
His Pro His Leu Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr
          835          840          845
Ser Pro Ser Thr Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val
850          855          860
Pro Pro Leu Asp Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln
865          870          875          880
Pro Pro His Tyr Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro
          885          890          895
Thr Pro Pro Asp Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln

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900 905 910
 Gly Leu Leu Ser Pro Arg His Ser Leu Thr Gly ~~His Ser Asp Ile Arg~~
 915 920 925
 Leu Pro Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln
 930 935 940
 Arg Gln Gln Gln Gln Gln Gln Gln Gln Glu Tyr Gln Glu Leu
 945 950 955 960
 Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser Leu
 965 970 975
 Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln Asn Ala
 980 985 990
 Asp Ser Tyr His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln
 995 1000 1005
 Leu Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser
 1010 1015 1020
 Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met Gly
 1025 1030 1035 1040
 Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala Ser Leu
 1045 1050 1055
 Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln His Leu Asn
 1060 1065 1070
 Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile Leu Leu Ser Tyr
 1075 1080 1085
 Lys His Pro Glu Val Ser Phe Ser Met Glu Gln Ala Gly Val
 1090 1095 1100

<210> 6101
 <211> 1447
 <212> DNA
 <213> Homo sapiens

<400> 6101
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 120
 catctagaaa tatactccgt gatcttttctt gatggccaga ctgtgtaaaaa ttcatacagt
 180
 gtttactaca gggatcccca aatattgtta gttgaatgaa caaacacaca tttcaaggag
 240
 ggactacag tgagtagatg aacagttttc tgataggaga ttgtacaagt aatgttttca
 300
 ccagtgtatt ttaggacagc agattcagat taatgcgctg ggactgaatg caaatagtaa
 360
 aattacaaat ataaagtaaa aatttggaac ctttgccaca gagaggaata ataaattgat
 420
 ttaataattt gaaagaactg taagggttag gttttgttct ttttttagt gcgactgaga
 480
 ttggagtctg tttgtagaca tatctgaaaa aagtgaaggg ggagatggaa gatggtaaat
 540
 gccaaggaaa agatggaagg ataatcagt gtaataaaaa ggagcacttc tttttcgcca
 600
 acagaagtaa aggtaaaggt taagtgtctg agttaacgaa tggattgttg acctctgggg
 660

aggggtgctcc catcagctca gctttgtgac gacctaagaa tatcccttcc acacctttcc
 720
 tgateccaatc gttctggctg cataaaacca cctaaatcaa tcaactgtta cacttccctt
 780
 agtgctagga catattcata taactcccac gtattaaatg aaaatacatc catctaaaaa
 840
 taaaacaaca agattgctgc tacaccaaga aaggatttta aaaaggcctg ttcacaagct
 900
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 960
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 1080
 tccggccgcc accatccact cgacggctct cggcccgaac gcttggtcgc accgcctgcc
 1140
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 1200
 ccaacgctga cgcccgcggt ctgaggtcgc catgggaaga gcggtaggcc accctgctcc
 1260
 tctgatacc ggaggacagg gacacattgt tcagggccat attcaaacac tgcccgcagt
 1320
 acttgcggtta cgtccctttg tgaaggcagg cccttcgcgg ctccccagat cagtccagcc
 1380
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 1440
 agccgcc
 1447

<210> 6102
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 6102
 Met Ala Leu Asn Asn Val Ser Leu Ser Ser Gly Asp Gln Arg Ser Arg
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 Val Ala Tyr Arg Ser Ser His Gly Asp Leu Arg Pro Arg Ala Ser Ala
 20 25 30
 Leu Ala Met Val Ser Gly Asp Gly Phe Leu Val Ser Arg Pro Glu Ala
 35 40 45
 Ile His Leu Gly Pro Arg Gln Ala Val Arg Pro Ser Val Arg Ala Glu
 50 55 60
 Ser Arg Arg Val Asp Gly Gly Gly Arg Ser Pro Arg Glu Pro Asp Gly
 65 70 75 80
 Arg Gly Arg Ser Arg Gln Ala Arg Phe Ser Pro Tyr Pro Ile Pro Ala
 85 90 95
 Val Glu Pro Asp Leu Leu Arg Ser Val Leu Gln Gln Arg Leu Ile Ala
 100 105 110
 Leu Gly Gly Val Ile Ala Ala Arg Ile Ser Val
 115 120

<210> 6103
 <211> 309

<212> DNA

<213> Homo sapiens

<400> 6103

agatcttctt tttgagttct aggttctctg gaacacactc ctgaatgtgc acagcgccct
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 120
 agaacctatg ccttgatgaa gaagattggg cagtccccag tgagagtcct gaaggagatt
 180
 gacggcttcg tcctgaaccg cctgcagtac gccgtcatca gtgaggcctg gagactggtg
 240
 gaggaagaaa tagtatctcc tagcgaccta gacctggtca tgtcagacgg gctgggcatg
 300
 cggtagcg
 309

<210> 6104

<211> 71

<212> PRT

<213> Homo sapiens

<400> 6104

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Ala | Pro | Ala | Thr | Met | Asp | Arg | Thr | Tyr | Ala | Leu | Met | Lys | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Gly | Gln | Ser | Pro | Val | Arg | Val | Leu | Lys | Glu | Ile | Asp | Gly | Phe | Val |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Leu | Asn | Arg | Leu | Gln | Tyr | Ala | Val | Ile | Ser | Glu | Ala | Trp | Arg | Leu | Val |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Glu | Glu | Glu | Ile | Val | Ser | Pro | Ser | Asp | Leu | Asp | Leu | Val | Met | Ser | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Leu | Gly | Met | Arg | Tyr | Ala | | | | | | | | | |
| 65 | | | | | 70 | | | | | | | | | | |

<210> 6105

<211> 1846

<212> DNA

<213> Homo sapiens

<400> 6105

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 120
 gggatgaagt ggtgtctccc cttccatctg ctctgcaggg gtccctcagg ctccctatca
 180
 gccctccag ctgcctcagt tatctctgca ccccatctt cctcctcccg acatcgcaaa
 240
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 gaaaagggcc gagggagttg gggaggccgc caccaccacc accaccact gcctgcagca
 360
 ggcttcaaaa agcaacagcg caagttccag tatgggaatt attgcaaata ctatgggtac
 420

cgcaatcctt cctgtgagga tgggcgcctt cgggtgttga agcctgagtg gtttcggggc
480
cgggacgtcc tagatctggg ctgcaatgtg ggccatctga ccctgagcat tgcctgcaag
540
tggggcccgt cccgcatggg gggcctggat atcgattccc ggctcatcca ttctgcccgc
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660
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720
gcctcgctga ctgccagccg gggctccatc gctgcccccc aagtgcctt ggatggagcg
780
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840
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960
cggcacctac gccctggggg catcctgggc ctagagcccc aacctgggc gtcgtatggc
1020
aagagaaaga ctcttacaga aacgatctac aagaactact accgaatcca attgaagcca
1080
gagcagttca gttcctacct gacatcccca gacgtgggct tctccagcta tgagcttgtg
1140
gccacacccc acaacacctc taaaggcttc cagcgtcctg tgtacctgtt ccacaaggcc
1200
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1260
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1320
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1380
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1560
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1620
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1680
gggaggcacg caggtactgt gaaaatcctt ccctttgcc tccccagtg ggagaggggg
1740
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1800
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
1846

<210> 6106

<211> 405

<212> PRT

<213> Homo sapiens

<400> 6106
Xaa Pro Ala Ala Ala Gly Ser Leu Thr Pro Arg Gly Gly Arg Leu Thr
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Ala Ala Ala Ala Gln Gly Pro Glu Pro Gly Met Pro Pro Asn Pro Met
20 25 30
Asn Ser Thr Gln Pro Ser Thr Ala Gly Met Lys Trp Cys Leu Pro Phe
35 40 45
His Leu Leu Cys Arg Gly Pro Ser Gly Ser Leu Ser Ala Pro Pro Ala
50 55 60
Ala Ser Val Ile Ser Ala Pro Pro Ser Ser Ser Ser Arg His Arg Lys
65 70 75 80
Arg Arg Arg Thr Ser Ser Lys Ser Glu Ala Gly Ala Arg Gly Gly Gly
85 90 95
Gln Gly Ser Lys Glu Lys Gly Arg Gly Ser Trp Gly Gly Arg His His
100 105 110
His His His Pro Leu Pro Ala Ala Gly Phe Lys Lys Gln Gln Arg Lys
115 120 125
Phe Gln Tyr Gly Asn Tyr Cys Lys Tyr Tyr Gly Tyr Arg Asn Pro Ser
130 135 140
Cys Glu Asp Gly Arg Leu Arg Val Leu Lys Pro Glu Trp Phe Arg Gly
145 150 155 160
Arg Asp Val Leu Asp Leu Gly Cys Asn Val Gly His Leu Thr Leu Ser
165 170 175
Ile Ala Cys Lys Trp Gly Pro Ser Arg Met Val Gly Leu Asp Ile Asp
180 185 190
Ser Arg Leu Ile His Ser Ala Arg Gln Asn Ile Arg His Tyr Leu Ser
195 200 205
Glu Glu Leu Arg Leu Pro Pro Gln Thr Leu Glu Gly Asp Pro Gly Ala
210 215 220
Glu Gly Glu Glu Gly Thr Thr Thr Val Arg Lys Arg Ser Cys Phe Pro
225 230 235 240
Ala Ser Leu Thr Ala Ser Arg Gly Pro Ile Ala Ala Pro Gln Val Pro
245 250 255
Leu Asp Gly Ala Asp Thr Ser Val Phe Pro Asn Asn Val Val Phe Val
260 265 270
Thr Gly Asn Tyr Val Leu Asp Arg Asp Asp Leu Val Glu Ala Gln Thr
275 280 285
Pro Glu Tyr Asp Val Val Leu Cys Leu Ser Leu Thr Lys Trp Val His
290 295 300
Leu Asn Trp Gly Asp Glu Gly Leu Lys Arg Met Phe Arg Arg Ile Tyr
305 310 315 320
Arg His Leu Arg Pro Gly Gly Ile Leu Val Leu Glu Pro Gln Pro Trp
325 330 335
Ser Ser Tyr Gly Lys Arg Lys Thr Leu Thr Glu Thr Ile Tyr Lys Asn
340 345 350
Tyr Tyr Arg Ile Gln Leu Lys Pro Glu Gln Phe Ser Ser Tyr Leu Thr
355 360 365
Ser Pro Asp Val Gly Phe Ser Ser Tyr Glu Leu Val Ala Thr Pro His
370 375 380
Asn Thr Ser Lys Gly Phe Gln Arg Pro Val Tyr Leu Phe His Lys Ala
385 390 395 400
Arg Ser Pro Ser His
405

<210> 6107
 <211> 896
 <212> DNA
 <213> Homo sapiens

<400> 6107
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 180
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 240
 tgggggagtt cagttggctc ggggttgctt tggcctgcca ccagggtggtc cacatgcccc
 300
 aggtggagga cggatgtgtc gcctgctgac acaatagcgc ccaggagctg gttgctaccg
 360
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 420
 cctgccacca ccatcacctc attaccacaca ccctcaatga gggtagacac agtgaccccc
 480
 ttagccgacc ctactcctca ctggccggga caactggtct tatcacggag gctggggcca
 540
 ggcagccctt cggttcgggt gggcccagac cccagtccaa cgccgagggga ataggaccat
 600
 ccaaaagcgg aaccttcgcc tcagaaaaag ggtgcgggac ccctcctcac cgtgcgggtca
 660
 cggtagcgac agggtagatc acaggctgag ggacagagca aagaccctg aggccggaca
 720
 cctgggggtcc tgccggggcc ctccccacga gagttccctg tgtctgtgcc aatcgttttc
 780
 gtctttcttt gccgcagttt cttttcctgt aaatcatggt taatgacatt aaccttctta
 840
 ccattcagggg ttagttgtgg ttgtgataaa taattactac cgttattaag caattg
 896

<210> 6108
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 6108
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 Gly Leu Ser Ser Asp Leu Arg Gly Ala Ser Gly Leu Leu Leu Pro Ala
 20 25 30
 Pro Ala Cys Leu Leu Gly Arg Pro Trp Met Ser Arg Arg Cys Ser Arg
 35 40 45
 Leu Gly Ser Thr Pro Pro Pro Ala Pro Ala Ser Pro Val Glu Ser Pro
 50 55 60
 Arg Pro Ser Pro Ala Ser Ser Ala Phe Ser Ser Leu Pro Ser Asp Gly
 65 70 75 80
 Trp Gly Ser Ser Val Gly Ser Gly Leu Pro Trp Pro Ala Thr Arg Trp

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<210> 6109
<211> 2087
<212> DNA
<213> Homo sapiens
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5292

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 1380
 taccagctg ctgtggaacg ggtatggaga ggtcataaac ctagagtcag tgcctgttg
 1440
 gtcctagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
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 1560
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 1620
 agtgccaaac aaatcccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
 1680
 ccagcacctc agtgaagggg gcctgcttgc tctttatttt ggtcccggat cctgggggtg
 1740
 ggcagaaata ttttctgggc tggggtagga ggaaggttgt tgcagccatc tactgctgct
 1800
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 1860
 ctgccaaaac atttttttaa atacacccga ggagcccaag ggggaagggc aatgcctacc
 1920
 cccagcgta tttttgggga gggagggctg tgcataggga catattcttt agaattctatt
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 2040
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 2087

<210> 6110

<211> 323

<212> PRT

<213> Homo sapiens

<400> 6110

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 20 25 30
 Pro Gly Ala Ala Ala Gly Leu Thr Leu Leu Cys Ser Leu Val Pro Ile
 35 40 45
 Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser Arg
 50 55 60
 Gln Lys Ala Leu Ser Leu Val Ser Cys Phe Ala Gly Gly Val Phe Leu
 65 70 75 80
 Ala Thr Cys Leu Leu Asp Leu Leu Pro Asp Tyr Leu Ala Ala Ile Asp
 85 90 95
 Glu Ala Leu Ala Ala Leu His Val Thr Leu Gln Phe Pro Leu Gln Glu
 100 105 110
 Phe Ile Leu Ala Met Gly Phe Phe Leu Val Leu Val Met Glu Gln Ile
 115 120 125
 Thr Leu Ala Tyr Lys Glu Gln Ser Gly Pro Ser Pro Leu Glu Glu Thr
 130 135 140
 Arg Ala Leu Leu Gly Thr Val Asn Gly Gly Pro Gln His Trp His Asp

145 150 155 160
 Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
 165 170 175
 Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
 180 185 190
 Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
 195 200 205
 Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
 210 215 220
 Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
 225 230 235 240
 Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
 245 250 255
 Ala Ala Leu Ala Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
 260 265 270
 Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
 275 280 285
 Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
 290 295 300
 Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
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 Ile Gln Ile

<210> 6111

<211> 1706

<212> DNA

<213> Homo sapiens

<400> 6111

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 180
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 720

tccccctcct gtctccactt gcattcaggg gtggctgctg ttctgagaac attagaactg
 780
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 840
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 900
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 960
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 1080
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 1140
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 1200
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 1380
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<210> 6112

<211> 110

<212> PRT

<213> Homo sapiens

<400> 6112

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Leu | Phe | Cys | Phe | Val | Leu | Phe | Leu | Arg | Trp | Ser | Phe | Pro | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Ala | Gln | Ala | Gly | Val | Xaa | Trp | His | Ser | Leu | Gly | Ser | Leu | Gln | Pro |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Pro | Leu | Pro | Gly | Phe | Lys | Gln | Phe | Ser | Cys | Arg | Ser | Leu | Pro | Ser | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Trp | Asp | Tyr | Arg | His | Ala | Pro | Pro | Arg | Gln | Ala | Asn | Phe | Cys | Ile | Phe |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Arg | Asp | Gly | Val | Ser | Pro | Cys | Trp | Pro | Gly | Trp | Ser | Gln | Thr | Pro |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Asp | Leu | Arg | Arg | Ser | Thr | His | Leu | Ser | Val | Pro | Lys | Cys | Trp | Asp | Tyr |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Arg | Arg | Glu | Pro | Pro | His | Leu | Ala | Tyr | Glu | Trp | Ser | Phe | Asn | | |

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<210> 6113
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 6113
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240
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300
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360
atcatgttaa ccgcgcgggc tcattctgct gaacgaagcc gggcagaggg tggggaagac
420
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480
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540
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660
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720
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780
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840
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900
caaaaaaagg ttcgagaaca tcatcgaaaa ttaagaaagg aggctaaaaa gcggggtcac
960
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1095

<210> 6114
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6114
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His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
      20             25             30
Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
      35             40             45
Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
      50             55             60
Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys
      65             70             75             80
Leu Asp Arg Gln Lys Glu Leu
      85

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<210> 6115

<211> 411

<212> DNA

<213> Homo sapiens

<400> 6115

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120
actgtggcgt cccagggcgg tggagggagc aacttcgggg gcacgtcctc gtaaatacccg
180
tggaggacac tgaccctgta cccaccctc gaggccagaa gtcggttcct ttgggggaac
240
tgaggggcca gagcactcgc cccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
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411

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<210> 6116

<211> 129

<212> PRT

<213> Homo sapiens

<400> 6116

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Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
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Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
      20             25             30
Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
      35             40             45
Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
      50             55             60
Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
      65             70             75             80
Leu Pro Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
      85             90             95
Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala
      100            105            110
Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg

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 <210> 6117
 <211> 962
 <212> DNA
 <213> Homo sapiens

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 120
 tcgggaggcg acaagatgtt ctccctcaag aagtggaacg cgggtggccat gtggagctgg
 180
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 240
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 300
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 360
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 420
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 480
 gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catcaaagcc
 540
 ttggttttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
 600
 attaaaggtg gtccttccta cctctgtggg gtgtgtcgcg cacacagctt agaagtgcta
 660
 taaaaaagga aagagctcca aattgaatca cttttataat ttaccattt ctatacaaca
 720
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 780
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 840
 aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
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 aa
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 <210> 6118
 <211> 113
 <212> PRT
 <213> Homo sapiens

 <400> 6118
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20 25 30
 Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
 35 40 45
 Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
 50 55 60
 Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
 65 70 75 80
 Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
 85 90 95
 Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
 100 105 110
 Lys

<210> 6119
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 6119
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 120
 tggccccaca gaactcatgc ctgcttgctt taaaccacacc aatgaaaact ccccatggga
 180
 aacctgcttg gataatactt tggaccccaa taaatgcttt aatcccacaa gtctctctgc
 240
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 300
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 360
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 375

<210> 6120
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 6120
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 20 25 30
 Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
 35 40 45
 Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
 50 55 60
 Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
 65 70 75 80
 Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
 85 90 95
 Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu

100
Cys Asp Val Ser Cys Cys
115

105

110

<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens

<400> 6121
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aagaacact ctccttctgc cacatttgtt ttgagctaaa tattgagggg gtaccaaagt
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240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gtttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaaatgga
480
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540
atacagactt tggactttct atgttacaag attcagggtgc cactttatgt cgtaacagtg
600
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660
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720
taactacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgttg
780
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840
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900
ccctttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtggtccg
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1020
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1039

<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens

<400> 6122
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| | | | |
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| Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe | | | |
| 20 | 25 | 30 | |
| Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp | | | |
| 35 | 40 | 45 | |
| Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys | | | |
| 50 | 55 | 60 | |
| Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys | | | |
| 65 | 70 | 75 | 80 |
| Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp | | | |
| 85 | 90 | 95 | |
| Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys | | | |
| 100 | 105 | 110 | |
| Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu | | | |
| 115 | 120 | 125 | |
| Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala | | | |
| 130 | 135 | 140 | |
| Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg | | | |
| 145 | 150 | 155 | 160 |
| Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln | | | |
| 165 | 170 | 175 | |
| Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser | | | |
| 180 | 185 | 190 | |
| His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala | | | |
| 195 | 200 | 205 | |
| Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu | | | |
| 210 | 215 | 220 | |

<210> 6123

<211> 900

<212> DNA

<213> Homo sapiens

<400> 6123

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120
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180
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360
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420
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480
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540
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600

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ccgcaccgcc ttctgtctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
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 720
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<210> 6124

<211> 300

<212> PRT

<213> Homo sapiens

<400> 6124

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | His | Ala | Cys | Ile | Pro | Gln | Leu | Leu | Gly | Arg | Leu | Arg | Arg | Glu | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Leu | Asn | Pro | Gly | Gly | Gly | Gly | Cys | Gly | Glu | Leu | Arg | Ser | His | His |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Cys | Thr | Pro | Ala | Trp | Ala | Thr | Arg | Ala | Lys | Gln | Gln | Glu | Lys | Lys | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Ala | Ala | Leu | Cys | Pro | Lys | Pro | Thr | Ser | Arg | Ser | Pro | Asn | Leu | Gly |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Pro | Leu | Gly | Leu | Phe | Ser | Leu | Ser | Val | Pro | Asn | Leu | Leu | Leu | Ala | Gly |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Asn | Lys | Pro | Pro | Gly | Leu | Leu | Pro | Arg | Lys | Gly | Leu | Tyr | Met | Ala | Asn |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Asp | Leu | Lys | Leu | Leu | Arg | His | His | Leu | Gln | Ile | Pro | Ile | His | Phe | Pro |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Lys | Asp | Phe | Leu | Ser | Val | Met | Leu | Glu | Lys | Gly | Ser | Leu | Ser | Ala | Met |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Arg | Phe | Leu | Thr | Ala | Val | Asn | Leu | Glu | His | Pro | Glu | Met | Leu | Glu | Lys |
| | 130 | | | | | 135 | | | | 140 | | | | | |
| Ala | Ser | Arg | Glu | Leu | Trp | Met | Arg | Val | Trp | Ser | Arg | Val | Ser | Val | Gly |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 |
| Leu | Trp | Glu | Ser | Ser | Gly | Arg | Thr | Leu | Asp | Asp | Phe | Leu | Thr | Phe | Pro |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Arg | His | Val | Phe | Arg | Val | Met | Ile | Leu | Pro | Pro | Pro | Gly | Gly | Ser | Thr |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Val | Leu | Pro | Val | Thr | Pro | Leu | Ser | Pro | His | Arg | Leu | Pro | Ala | Val | Phe |
| | 195 | | | | | 200 | | | | | 205 | | | | |
| Ser | Ser | Ser | Gln | Asn | Glu | Asp | Ile | Thr | Glu | Pro | Gln | Ser | Ile | Leu | Ala |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ala | Glu | Lys | Ala | Gly | Met | Ser | Ala | Glu | Gln | Ala | Gln | Gly | Leu | Leu |
| 225 | | | | 230 | | | | | | 235 | | | | 240 | |
| Glu | Lys | Ile | Ala | Thr | Pro | Lys | Val | Lys | Asn | Gln | Leu | Lys | Glu | Thr | Thr |
| | | | | 245 | | | | 250 | | | | | 255 | | |
| Glu | Ala | Ala | Cys | Arg | Tyr | Gly | Ala | Phe | Gly | Leu | Pro | Ile | Thr | Val | Ala |
| | 260 | | | | | 265 | | | | | | 270 | | | |
| His | Val | Asp | Gly | Gln | Thr | His | Met | Leu | Phe | Gly | Ser | Asp | Arg | Met | Glu |
| | 275 | | | | | 280 | | | | | | 285 | | | |
| Leu | Leu | Ala | His | Leu | Leu | Gly | Glu | Lys | Trp | Met | Gly | | | | |

290

295

300

<210> 6125

<211> 468

<212> DNA

<213> Homo sapiens

<400> 6125

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180
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240
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360
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<210> 6126

<211> 156

<212> PRT

<213> Homo sapiens

<400> 6126

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Thr | Val | Thr | Gln | Glu | Lys | Ser | Arg | Met | Glu | Ala | Ser | Tyr | Leu | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Lys | Lys | Lys | Met | Lys | Gln | Asp | Leu | Glu | Asp | Ala | Ser | Asn | Lys | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Glu | Glu | Arg | Ala | Arg | Leu | Glu | Gly | Glu | Leu | Lys | Gly | Leu | Gln | Glu |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Gln | Ile | Ala | Glu | Thr | Lys | Ala | Arg | Leu | Ile | Thr | Gln | Gln | His | Asp | Arg |
| | 50 | | | | 55 | | | | | | 60 | | | | |
| Ala | Gln | Glu | Gln | Ser | Asp | His | Ala | Leu | Met | Leu | Arg | Glu | Leu | Gln | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Leu | Gln | Glu | Glu | Arg | Thr | Gln | Arg | Gln | Asp | Leu | Glu | Leu | Arg | Leu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Glu | Glu | Thr | Arg | Glu | Ala | Leu | Ala | Gly | Arg | Ala | Tyr | Ala | Ala | Glu | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Met | Glu | Gly | Phe | Glu | Leu | Gln | Thr | Lys | Gln | Leu | Thr | Arg | Glu | Val | Glu |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Glu | Leu | Lys | Ser | Glu | Leu | Gln | Ala | Ile | Arg | Asp | Glu | Lys | Asn | Gln | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Pro | Arg | Leu | Gln | Glu | Leu | Gln | Glu | Glu | Ala | Ala | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | |

<210> 6127

<211> 1900

<212> DNA

<213> Homo sapiens

<400> 6127

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 120
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<400> 6128

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<213> Homo sapiens

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| Val | Pro | Ile | Val | Ile | Gln | Asp | Asp | Ser | Leu | Pro | Ala | Gly | Pro | Pro | Pro |
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| Gln | Ile | Arg | Ile | Leu | Lys | Arg | Pro | Thr | Ser | Asn | Gly | Val | Val | Ser | Ser |
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<211> 595

<212> PRT

<213> Homo sapiens

<400> 6134

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| Asn | Asn | Glu | Leu | Thr | Val | Asn | Glu | Gly | Glu | Ile | Ile | Thr | Ile | Thr | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Asp | Val | Gly | Gly | Gly | Trp | Leu | Glu | Gly | Arg | Asn | Ile | Lys | Gly | Glu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Arg | Gly | Leu | Val | Pro | Thr | Asp | Tyr | Val | Glu | Ile | Leu | Pro | Ser | Asp | Gly |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Lys | Asp | Gln | Phe | Ser | Cys | Gly | Asn | Ser | Val | Ala | Asp | Gln | Ala | Phe | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Ser | Leu | Ser | Ala | Ser | Thr | Ala | Gln | Ala | Ser | Ser | Ser | Ala | Ala | Ser |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Asn | Asn | His | Gln | Val | Gly | Ser | Gly | Asn | Asp | Pro | Trp | Ser | Ala | Trp | Ser |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Ala | Ser | Lys | Ser | Gly | Asn | Trp | Glu | Ser | Ser | Glu | Gly | Trp | Gly | Ala | Gln |

| | | |
|---|-----|-----|
| 115 | 120 | 125 |
| Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp | | |
| 130 | 135 | 140 |
| Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly | | |
| 145 | 150 | 155 |
| Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser | | |
| 165 | 170 | 175 |
| Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly | | |
| 180 | 185 | 190 |
| Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe | | |
| 195 | 200 | 205 |
| Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln | | |
| 210 | 215 | 220 |
| Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly | | |
| 225 | 230 | 235 |
| Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp | | |
| 245 | 250 | 255 |
| Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr | | |
| 260 | 265 | 270 |
| Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys | | |
| 275 | 280 | 285 |
| His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala | | |
| 290 | 295 | 300 |
| Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu | | |
| 305 | 310 | 315 |
| Glu Glu Phe Ile Lys Met Arg Met Glu Arg Leu Gln Ala Trp Met Thr | | |
| 325 | 330 | 335 |
| Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln | | |
| 340 | 345 | 350 |
| Phe Leu Asn Phe Arg Asp Glu Lys Glu Trp Lys Thr Gly Lys Arg Lys | | |
| 355 | 360 | 365 |
| Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu | | |
| 370 | 375 | 380 |
| Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu | | |
| 385 | 390 | 395 |
| Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu | | |
| 405 | 410 | 415 |
| Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro | | |
| 420 | 425 | 430 |
| Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val | | |
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| Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile | | |
| 450 | 455 | 460 |
| Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu | | |
| 465 | 470 | 475 |
| Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr | | |
| 485 | 490 | 495 |
| Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly | | |
| 500 | 505 | 510 |
| Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys | | |
| 515 | 520 | 525 |
| Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met | | |
| 530 | 535 | 540 |
| Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile | | |

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 <213> Homo sapiens

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 <212> PRT
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 35 40 45
 Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
 50 55 60
 Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
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 Leu Val Lys Pro Ser Ala Ser Gln Tyr
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<210> 6137

<211> 2073

<212> DNA

<213> Homo sapiens

<400> 6137

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<210> 6138

<211> 550

<212> PRT

<213> Homo sapiens

<400> 6138

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| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Lys | Arg | Tyr | Lys | Ile | Gln | Lys | Lys | Val | Arg | Glu | His | His | Arg | Lys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Lys | Glu | Ala | Lys | Lys | Gln | Gly | His | Lys | Lys | Pro | Arg | Lys | Asp | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gly | Val | Pro | Asn | Ser | Ala | Pro | Phe | Lys | Glu | Ala | Leu | Leu | Arg | Glu | Ala |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Glu | Leu | Arg | Lys | Gln | Arg | Leu | Glu | Glu | Leu | Lys | Gln | Gln | Gln | Lys | Leu |
| | | | | 70 | | | | | | 75 | | | | 80 | |
| Asp | Arg | Gln | Lys | Glu | Leu | Glu | Lys | Lys | Arg | Lys | Leu | Glu | Thr | Asn | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Ile | Lys | Xaa | Ile | Lys | Cys | Gly | Thr | Xaa | Met | Glu | Lys | Glu | Phe | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Cys | Lys | Thr | Glu | Asn | Lys | Ala | Lys | Ser | Gly | Lys | Gln | Asn | Ser | Lys |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Lys | Leu | Tyr | Cys | Gln | Glu | Leu | Lys | Lys | Val | Ile | Glu | Ala | Ser | Asp | Val |
| | | | | | | 135 | | | | | 140 | | | | |
| Val | Leu | Glu | Val | Leu | Asp | Ala | Arg | Asp | Pro | Leu | Gly | Cys | Arg | Cys | Pro |
| | | | | | 150 | | | | | 155 | | | | 160 | |
| Gln | Val | Glu | Glu | Ala | Ile | Val | Gln | Ser | Gly | Gln | Lys | Lys | Leu | Val | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ile | Leu | Asn | Lys | Ser | Asp | Leu | Val | Pro | Lys | Glu | Asn | Leu | Glu | Ser | Trp |
| | | | | 180 | | | | 185 | | | | | 190 | | |
| Leu | Asn | Tyr | Leu | Lys | Lys | Glu | Leu | Pro | Thr | Val | Val | Phe | Arg | Ala | Ser |

| | | |
|---|-----|-----|
| 195 | 200 | 205 |
| Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys | | |
| 210 | 215 | 220 |
| Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly | | |
| 225 | 230 | 235 |
| Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile | | |
| 245 | 250 | 255 |
| Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile | | |
| 260 | 265 | 270 |
| Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly | | |
| 275 | 280 | 285 |
| Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile | | |
| 290 | 295 | 300 |
| Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala | | |
| 305 | 310 | 315 |
| Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu | | |
| 325 | 330 | 335 |
| Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu | | |
| 340 | 345 | 350 |
| Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val | | |
| 355 | 360 | 365 |
| Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val | | |
| 370 | 375 | 380 |
| Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu | | |
| 385 | 390 | 395 |
| Ala Tyr Tyr Cys His Pro Pro Thr Ser Trp Thr Pro Pro Pro Tyr Phe | | |
| 405 | 410 | 415 |
| Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu | | |
| 420 | 425 | 430 |
| Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His | | |
| 435 | 440 | 445 |
| Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile | | |
| 450 | 455 | 460 |
| Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg | | |
| 465 | 470 | 475 |
| Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val | | |
| 485 | 490 | 495 |
| Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu | | |
| 500 | 505 | 510 |
| Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr | | |
| 515 | 520 | 525 |
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| Phe Ser Thr Asp Tyr Val | | |
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<211> 2249

<212> DNA

<213> Homo sapiens

<400> 6139

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<213> Homo sapiens

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<400> 6143

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<210> 6146

<211> 100

<212> PRT

<213> Homo sapiens

<400> 6146

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ser | Pro | Val | Pro | Arg | Ala | Met | Ser | Ser | Gln | Gln | Gln | Gln | Arg | Gln | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Val | Pro | Thr | Pro | Glu | Ala | Gln | Gln | Gln | Val | Lys | Gln | Pro | Cys | |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Gln | Pro | Pro | Pro | Val | Lys | Cys | Gln | Glu | Thr | Cys | Ala | Pro | Lys | Thr | Lys |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Asp | Pro | Cys | Ala | Pro | Gln | Val | Lys | Lys | Gln | Cys | Pro | Pro | Lys | Asp | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ile | Ile | Pro | Ala | Gln | Gln | Lys | Cys | Pro | Ser | Ala | Gln | Gln | Ala | Ser | Lys |
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<210> 6147

<211> 1852

<212> DNA

<213> Homo sapiens

<400> 6147

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<210> 6148

<211> 410

<212> PRT

<213> Homo sapiens

<400> 6148

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Phe Asn Leu Asp Ile Arg Arg Ala Ile Gln Ile Leu Asn Glu Gly Ala
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Asp Thr Gln Leu Asn Arg Tyr Ile Glu Lys Leu Thr Asn Glu Met Lys
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Glu Ala Gly Asn Leu Glu Gly Ile Leu Leu Thr Gly Leu Thr Lys Asp
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195     200     205
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Gln Gly Arg Gly Phe Ser Gln Tyr Gly Val Ser Gly Ser Pro Thr Lys
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Ala Gln Phe Asn Asn Trp Phe Thr Trp Cys His Asn Cys Arg His Gly
355     360     365
Gly His Ala Gly His Met Leu Ser Trp Phe Arg Asp His Ala Glu Cys
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<210> 6149
 <211> 1949
 <212> DNA
 <213> Homo sapiens

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<210> 6150

<211> 508

<212> PRT

<213> Homo sapiens

<400> 6150

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| Met | Pro | Lys | Gly | Gly | Cys | Pro | Lys | Ala | Pro | Gln | Gln | Glu | Glu | Leu | Pro |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| Leu | Ser | Ser | Asp | Met | Val | Glu | Lys | Gln | Thr | Gly | Lys | Lys | Asp | Lys | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Val | Ser | Leu | Thr | Lys | Thr | Pro | Lys | Leu | Glu | Arg | Gly | Asp | Gly | Gly |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Lys | Glu | Val | Arg | Glu | Arg | Ala | Ser | Lys | Arg | Lys | Leu | Pro | Phe | Thr | Ala |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Gly | Ala | Asn | Gly | Glu | Gln | Lys | Asp | Ser | Asp | Thr | Glu | Lys | Gln | Gly | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Arg | Lys | Arg | Ile | Lys | Lys | Glu | Pro | Val | Thr | Arg | Lys | Ala | Gly | Leu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Leu | Phe | Gly | Met | Gly | Leu | Ser | Gly | Ile | Arg | Ala | Gly | Tyr | Pro | Leu | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Arg | Gln | Gln | Val | Ala | Leu | Leu | Met | Gln | Met | Thr | Ala | Glu | Glu | Ser |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Ala | Asn | Ser | Pro | Val | Asp | Thr | Thr | Pro | Lys | His | Pro | Ser | Gln | Ser | Thr |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Val | Cys | Gln | Lys | Gly | Thr | Pro | Asn | Ser | Ala | Ser | Lys | Thr | Lys | Asp | Lys |
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| Leu | Asn | Lys | Arg | Asn | Glu | Arg | Gly | Glu | Thr | Arg | Leu | His | Arg | Ala | Ala |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Ile | Arg | Gly | Asp | Ala | Arg | Arg | Ile | Lys | Glu | Leu | Ile | Ser | Glu | Gly | Ala |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Val | Asn | Val | Lys | Asp | Phe | Ala | Gly | Trp | Thr | Ala | Leu | His | Glu | Ala |

| | | |
|---|-----|-----|
| 195 | 200 | 205 |
| Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly | | |
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| Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Asp Thr Pro Leu His Asp | | |
| 225 | 230 | 235 |
| Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr | | |
| 245 | 250 | 255 |
| Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys | | |
| 260 | 265 | 270 |
| Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr | | |
| 275 | 280 | 285 |
| Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp | | |
| 290 | 295 | 300 |
| Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp | | |
| 305 | 310 | 315 |
| Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro | | |
| 325 | 330 | 335 |
| Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp | | |
| 340 | 345 | 350 |
| Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys | | |
| 355 | 360 | 365 |
| Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro | | |
| 370 | 375 | 380 |
| Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys | | |
| 385 | 390 | 395 |
| Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala | | |
| 405 | 410 | 415 |
| Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr | | |
| 420 | 425 | 430 |
| Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln | | |
| 435 | 440 | 445 |
| Lys Glu Lys Asn Lys Val Lys Lys Lys Arg Lys Lys Glu Thr Lys Gly | | |
| 450 | 455 | 460 |
| Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser | | |
| 465 | 470 | 475 |
| Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp | | |
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<212> DNA

<213> Homo sapiens

<400> 6151

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<210> 6152

<211> 130

<212> PRT

<213> Homo sapiens

<400> 6152

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Pro | Cys | Gly | Ser | Pro | Arg | Arg | Thr | Glu | Glu | Thr | Gly | Glu | Thr | Trp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Arg | Val | Ala | Phe | Ser | Leu | Phe | Thr | His | Thr | Cys | Thr | Gln | Pro | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Gly | Thr | Val | Asp | Thr | His | Leu | Pro | Ser | Leu | Leu | Leu | Pro | Val | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | His | Pro | Leu | Gly | Ala | Ala | Ser | Ala | Gly | Arg | Ala | Leu | Glu | Pro | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ala | Asp | Pro | His | Thr | Cys | Pro | Tyr | Gly | Arg | Lys | Glu | Ser | Arg | Gly | Glu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Lys | Val | Arg | Arg | Gly | Arg | Ala | Lys | Ser | Asn | Ser | Gly | Pro | Asn | Val | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Pro | Pro | Ala | Ala | Pro | Gln | Ser | Leu | Lys | Ser | Gly | Ser | Pro | Ser | Thr |
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<211> 1810

<212> DNA

<213> Homo sapiens

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<400> 6154

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Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
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Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
65           70           75           80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
      85           90           95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
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His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
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| Leu | Asn | His | Val | Pro | Arg | Gln | Met | Leu | Leu | Ile | Leu | Lys | Thr | Asn | Asp | | |
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| Lys | Lys | Lys | Asn | Thr | Cys | Ser | Phe | Phe | Arg | Arg | Thr | Gln | Ile | Ser | Phe | | |
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| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Ser | Val | Leu | Ile | Gln | Phe | Ala | Thr | Pro | Asn | Asp | Phe | Cys | Ser | Phe | Tyr | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| Asn | Ile | Leu | Lys | Thr | Cys | Arg | Gly | His | Thr | Leu | Glu | Arg | Ser | Val | Phe | | |
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| Ser | Glu | Arg | Thr | Glu | Glu | Ser | Ser | Ala | Val | Gln | Tyr | Phe | Gln | Phe | Tyr | | |
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| Met | Ala | Gln | His | Ala | Glu | Val | Leu | Val | Lys | Ser | Asn | Asn | Leu | Thr | Asp | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| Arg | Ile | Val | Val | Ile | Pro | Gly | Lys | Val | Glu | Glu | Val | Ser | Leu | Pro | Glu | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| Gln | Val | Asp | Ile | Ile | Ile | Ser | Glu | Pro | Met | Gly | Tyr | Met | Leu | Phe | Asn | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Glu | Arg | Met | Leu | Glu | Ser | Tyr | Leu | His | Ala | Lys | Lys | Tyr | Leu | Lys | Pro | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Ser | Gly | Asn | Met | Phe | Pro | Thr | Ile | Gly | Asp | Val | His | Leu | Ala | Pro | Phe | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| Thr | Asp | Glu | Gln | Leu | Tyr | Met | Glu | Gln | Phe | Thr | Lys | Ala | Asn | Phe | Trp | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |
| Tyr | Gln | Pro | Ser | Phe | His | Gly | Val | Asp | Leu | Ser | Ala | Leu | Arg | Gly | Ala | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Ala | Val | Asp | Glu | Tyr | Phe | Arg | Gln | Pro | Val | Val | Asp | Thr | Phe | Asp | Ile | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| Arg | Ile | Leu | Met | Ala | Lys | Ser | Val | Lys | Tyr | Thr | Val | Asn | Phe | Leu | Glu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Ala | Lys | Glu | Gly | Asp | Leu | His | Arg | Ile | Glu | Ile | Pro | Phe | Lys | Phe | His | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | |
| Met | Leu | His | Ser | Gly | Leu | Val | His | Gly | Leu | Ala | Phe | Trp | Phe | Asp | Val | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | |
| Ala | Phe | Ile | Gly | Ser | Ile | Met | Thr | Val | Trp | Leu | Ser | Thr | Ala | Pro | Thr | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | |
| Glu | | | | | | | | | | | | | | | | | |

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      450              455              460
Ser Val Ile Ala Ser Gly Ser Ser Val Gly His Asn Asn Leu Ile Pro
465              470              475              480
Leu Ala Asn Thr Gly Ile Val Asn His Thr His Ser Arg Met Gly Ser
      485              490              495
Ile Met Ser Thr Gly Ile Val Gln Gly Ser Ser Gly Ala Gln Gly Ser
      500              505              510
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val Asn Ser Gln Phe Thr
      515              520              525
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro Met Ser Ile Pro Thr
      530              535              540
Asn Thr Met His Tyr Gly Ser
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<210> 6161

<211> 1489

<212> DNA

<213> Homo sapiens

<400> 6161

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120
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180
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240
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300
ctgacctgctc cttctctcac agagggacag gggagggtga tgagtcagtg gactgaatgt
360
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420
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480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
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600
cagccgaggt gagaccaaag tgccagctca ctgccaccct cagtaaagac taacttgccc
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720
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780
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840
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900
gttgctcttc cttcccattt tgcaactgag caaacagcct gaaagagaca aaaaccaggt
960
agttagcatg accccaaagc cactccctgg tctacgctgt tctgcagcct gagcctgggg
1020

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tggccagggtg gggttgtgca gtgagggggg gaaggagaat agcccccaaa aatgctgccg
 1080
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 1140
 ggttttccca gtcattgtaa tgatacaatc agatttgctg tgtcttcaag ttaccatggt
 1200
 aaccgtactt ccaccacacca agagtggatt ggagaaggca aaactagggc agagaagcca
 1260
 gggagtgttg agaaggctcg aaccagaca gtgggcagct gggcccaag acggatgggg
 1320
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 1380
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 1489

<210> 6162

<211> 58

<212> PRT

<213> Homo sapiens

<400> 6162

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Cys | Met | Ile | Phe | Ser | Arg | Phe | Ser | Thr | Glu | Gly | Ser | Glu | Leu | Trp |
| 1 | | | 5 | | | | 10 | | | | | | 15 | | |
| Glu | Arg | Lys | Glu | Asp | Gly | Gly | Asn | Gly | Lys | Lys | Arg | Ser | Thr | Leu | Leu |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Lys | Gly | Thr | Glu | Pro | Gly | Val | Val | Ala | His | Ala | Cys | Asn | Pro | Xaa |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Leu | Gly | Gly | Arg | Ser | Lys | Glu | Ile | Thr | | | | | | |
| | 50 | | | | | 55 | | | | | | | | | |

<210> 6163

<211> 713

<212> DNA

<213> Homo sapiens

<400> 6163

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 120
 cagggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
 180
 gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaaccccaa tcacgctctg
 240
 atggataccg gtacctgggc aaggatacc; tggatggact tgattcttct ctctgaaat
 300
 gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaacctctt aaaacccgag
 360
 tgtcattttt agaatcaaaa aggaaggaag gcagtggctg gctgcactgg tcagtaucga
 420
 gatctggagc ttttcgctt aaggctcactg tttaaaactc tgccctgggt cagttgtaac
 480

agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgcaa gaggggctgt
 540
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 600
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 660
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<210> 6164

<211> 120

<212> PRT

<213> Homo sapiens

<400> 6164

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Trp | Val | Thr | Val | Thr | Gln | Trp | Val | Thr | Gly | Ala | Glu | Gln | Gly | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Gly | Arg | Leu | Lys | Gln | Asn | Leu | Gln | Glu | Lys | Ser | Lys | Gly | Ala | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Leu | Pro | Gly | Lys | Ala | Gly | Leu | Ala | Leu | Leu | Lys | Pro | Gln | Ser | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Asp | Gly | Tyr | Arg | Tyr | Leu | Gly | Lys | Asp | Thr | Val | Asp | Gly | Leu | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Ser | Leu | Leu | Lys | Cys | Thr | Arg | Arg | Cys | Met | Arg | Gly | Phe | Arg | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Pro | Glu | Lys | Gln | Pro | Ser | Lys | Thr | Arg | Val | Ser | Phe | Leu | Glu | Ser | Lys |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Arg | Lys | Glu | Gly | Ser | Gly | Trp | Leu | His | Trp | Ser | Val | Thr | Arg | Ser | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Phe | Arg | Leu | Lys | Val | Thr | Val | | | | | | | | |
| | | | 115 | | | | 120 | | | | | | | | |

<210> 6165

<211> 1004

<212> DNA

<213> Homo sapiens

<400> 6165

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 120
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 180
 aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
 240
 ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgagat cgacggcaca
 300
 ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
 360
 ctcaagaaca tgggctatgc cgccaaggcc atgaaggcg cccatgacaa catggacatc
 420
 gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
 480

tcaacagcaa tttcgaaacc tgtaggggtt ggagaagagt ttgacgagga tgagctcatg
 540
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 600
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 660
 aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
 720
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 780
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 900
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 960
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 1004

<210> 6166

<211> 239

<212> PRT

<213> Homo sapiens

<400> 6166

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Arg | Ile | Gly | Arg | Arg | Arg | Pro | Ala | Arg | Arg | Ala | Ala | Thr | Met |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Val | Phe | Gly | Lys | Leu | Phe | Gly | Ala | Gly | Gly | Gly | Lys | Ala | Gly | Lys |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Gly | Gly | Pro | Thr | Pro | Gln | Glu | Ala | Ile | Gln | Arg | Leu | Arg | Asp | Thr | Glu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Glu | Met | Leu | Ser | Lys | Lys | Gln | Glu | Phe | Leu | Glu | Lys | Lys | Ile | Glu | Gln |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Glu | Leu | Thr | Ala | Ala | Lys | Lys | His | Gly | Thr | Lys | Asn | Lys | Arg | Ala | Ala |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Gln | Ala | Leu | Lys | Arg | Lys | Lys | Arg | Tyr | Glu | Lys | Gln | Leu | Ala | Gln |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Asp | Gly | Thr | Leu | Ser | Thr | Ile | Glu | Phe | Gln | Arg | Glu | Ala | Leu | Glu |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Asn | Ala | Asn | Thr | Asn | Thr | Glu | Val | Leu | Lys | Asn | Met | Gly | Tyr | Ala | Ala |
| | 115 | | | | 120 | | | | | | | 125 | | | |
| Lys | Ala | Met | Lys | Ala | Ala | His | Asp | Asn | Met | Asp | Ile | Asp | Lys | Val | Asp |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Glu | Leu | Met | Gln | Asp | Ile | Ala | Asp | Gln | Gln | Glu | Leu | Ala | Glu | Glu | Ile |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Thr | Ala | Ile | Ser | Lys | Pro | Val | Gly | Phe | Gly | Glu | Glu | Phe | Asp | Glu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Asp | Glu | Leu | Met | Ala | Glu | Leu | Glu | Glu | Leu | Glu | Gln | Glu | Glu | Leu | Asp |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Lys | Asn | Leu | Leu | Glu | Ile | Ser | Gly | Pro | Glu | Thr | Val | Pro | Leu | Pro | Asn |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Val | Pro | Ser | Ile | Ala | Leu | Pro | Ser | Lys | Pro | Ala | Lys | Lys | Lys | Glu | Glu |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Glu | Asp | Asp | Asp | Met | Lys | Glu | Leu | Glu | Asn | Trp | Ala | Gly | Ser | Met | |

225

230

235

<210> 6167

<211> 1220

<212> DNA

<213> Homo sapiens

<400> 6167

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120
tcaaacttgt cttaatgaga tggaagtgtt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctcctcc cgggtctgcg cggacgcggc ctccttacct
240
catttgcct cgcctctccc cgtccctcta cgcgttttgg tccctgtttg gtgctttctg
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360
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420
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480
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600
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720
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900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
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1020
atagaacagc tcaatcagtg tttgatccaa cacttccatc tcattaagac aagtttgatt
1080
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<210> 6168

<211> 90

<212> PRT

<213> Homo sapiens

<400> 6168

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Gly | Thr | Gly | Glu | Val | Glu | Asp | Ile | Glu | Gln | Leu | Asn | Gln | Cys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Gln | His | Phe | His | Leu | Ile | Lys | Thr | Ser | Leu | Ile | Phe | Leu | Cys | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Phe | His | Gly | Ile | His | Glu | Asn | Leu | Leu | Thr | Val | Gly | Val | Ser | Lys |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Glu | Ala | Tyr | Leu | Met | Thr | Ser | Val | Asn | Gly | Lys | Asn | Lys | Thr | Lys | Met |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Leu | Tyr | Gly | Gln | Ser | His | Lys | Gly | Lys | Asp | | | | | | |
| | | | | 85 | | | | | 90 | | | | | | |

<210> 6169

<211> 720

<212> DNA

<213> Homo sapiens

<400> 6169

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120
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180
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240
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300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggagggt caacggagag
360
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540
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600
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720

<210> 6170

<211> 101

<212> PRT

<213> Homo sapiens

<400> 6170

Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | | | |
| Gln | Asn | Gly | Ser | Gly | Gly | Ser | Asn | His | Leu | Leu | Glu | Cys | Gly | Gly | Leu | | | | |
| | | | 20 | | | | | 25 | | | | | 30 | | | | | | |
| Arg | Glu | Gly | Arg | Ser | Asn | Gly | Glu | Thr | Pro | Ala | Val | Asp | Ile | Gly | Ala | | | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | | | |
| Ala | Asp | Leu | Ala | His | Ala | Gln | Gln | Gln | Gln | Gln | Gln | Trp | His | Leu | Ile | | | | |
| | 50 | | | | | 55 | | | | 60 | | | | | | | | | |
| Asn | His | Gln | Pro | Ser | Arg | Ser | Pro | Ser | Ser | Trp | Leu | Lys | Arg | Leu | Ile | | | | |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | | | | | |
| Ser | Ser | Pro | Trp | Glu | Leu | Glu | Val | Leu | Gln | Val | Pro | Cys | Gly | Glu | Gln | | | | |
| | | | 85 | | | | | 90 | | | | | | 95 | | | | | |
| Leu | Leu | Arg | Arg | Arg | | | | | | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | | | | | |

<210> 6171

<211> 1130

<212> DNA

<213> Homo sapiens

<400> 6171

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120
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180
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360
acaaaggata cctcgctagc tagttttatc cctgcagtga atgatttgac ctctgatctc
420
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480
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540
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660
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780
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840
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900
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960
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1020

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1080

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1130

<210> 6172

<211> 292

<212> PRT

<213> Homo sapiens

<400> 6172

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Pro | Leu | Gly | Val | Pro | Ser | Lys | Val | Ala | Gly | Ala | Ala | Ala | Met | Glu |
| 1 | | | 5 | | | | | 10 | | | | | | 15 | |
| Pro | Gln | Glu | Glu | Arg | Glu | Thr | Gln | Val | Ala | Ala | Trp | Leu | Lys | Lys | Ile |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Phe | Gly | Asp | His | Pro | Ile | Pro | Gln | Tyr | Glu | Val | Asn | Pro | Arg | Thr | Thr |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Glu | Ile | Leu | His | His | Leu | Ser | Glu | Arg | Asn | Arg | Val | Arg | Asp | Arg | Asp |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Val | Tyr | Leu | Val | Ile | Glu | Asp | Leu | Lys | Gln | Lys | Ala | Ser | Glu | Tyr | Glu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Ser | Glu | Ala | Lys | Tyr | Leu | Gln | Asp | Leu | Leu | Met | Glu | Ser | Val | Asn | Phe |
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| Val | Asp | Ser | Ala | Val | Ala | Leu | Glu | Thr | Lys | Asp | Thr | Ser | Leu | Ala | Ser |
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| Leu | Thr | Ala | Thr | Leu | Val | Leu | Glu | Lys | Cys | Leu | Gln | Glu | Asp | Val | Lys |
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| Lys | Ala | Glu | Leu | His | Leu | Ser | Thr | Glu | Arg | Ala | Lys | Val | Asp | Asn | Arg |
| | | 180 | | | | | 185 | | | | | 190 | | | |
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| Gly | Ile | Lys | Ala | Ala | Glu | Glu | Gln | Leu | Ser | Ala | Arg | Gly | Met | Asp | Ala |
| | 210 | | | | 215 | | | | | 220 | | | | | |
| Ser | Leu | Ser | His | Gln | Ser | Leu | Val | Ala | Leu | Ser | Glu | Lys | Leu | Ala | Arg |
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| Leu | Lys | Gln | Gln | Thr | Ile | Pro | Leu | Lys | Lys | Lys | Leu | Glu | Ser | Tyr | Leu |
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| Asp | Leu | Met | Pro | Asn | Pro | Ser | Leu | Ala | Gln | Val | Lys | Ile | Glu | Glu | Ala |
| | 260 | | | | | | 265 | | | | | 270 | | | |
| Lys | Arg | Glu | Leu | Asp | Ser | Ile | Glu | Ala | Glu | Leu | Thr | Arg | Arg | Val | Asp |
| | 275 | | | | | 280 | | | | | | 285 | | | |
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<213> Homo sapiens

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<210> 6174

<211> 299
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 <213> Homo sapiens

<400> 6174

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Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
 35          40          45
Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
 50          55          60
Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
 65          70          75          80
Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
 85          90          95
Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
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Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
115          120          125
Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
130          135          140
Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
145          150          155          160
Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
165          170          175
Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
180          185          190
Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
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Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
210          215          220
Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
225          230          235          240
Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
245          250          255
Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
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Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
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Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
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<210> 6175
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 <212> DNA
 <213> Homo sapiens

<400> 6175

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<213> Homo sapiens

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35 40 45
Asp Ile Lys Arg Leu Pro Trp Leu Asn Arg Ser Gln Thr Val Val Glu
50 55 60
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<211> 310

<212> PRT

<213> Homo sapiens

<400> 6178

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ser | Gly | Gly | Phe | Gln | Val | Lys | Leu | Tyr | Asp | Ile | Glu | Gln | Gln | Gln | Ile |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Arg | Asn | Ala | Leu | Glu | Asn | Ile | Arg | Lys | Glu | Met | Lys | Leu | Leu | Glu | Gln |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Ala | Gly | Ser | Leu | Lys | Gly | Ser | Leu | Ser | Val | Glu | Glu | Gln | Leu | Ser | Leu |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ile | Ser | Gly | Cys | Pro | Asn | Ile | Gln | Glu | Ala | Val | Glu | Gly | Ala | Met | His |
| 65 | | | | 70 | | | | 75 | | | | | | 80 | |
| Ile | Gln | Glu | Cys | Val | Pro | Glu | Asp | Leu | Glu | Leu | Lys | Lys | Lys | Ile | Phe |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Gln | Leu | Asp | Ser | Ile | Ile | Asp | Asp | Arg | Val | Ile | Leu | Ser | Ser | Ser |
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| Thr | Ser | Cys | Leu | Met | Pro | Ser | Lys | Leu | Phe | Ala | Gly | Leu | Val | His | Val |

| | | | | |
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| Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp | | | | |
| 145 | | 150 | | 155 |
| Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser | | | | |
| | 165 | | 170 | |
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| | 180 | | 185 | |
| His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu | | | | |
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| Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala | | | | |
| | 210 | | 215 | |
| Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu | | | | |
| 225 | | 230 | | 235 |
| Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr | | | | |
| | 245 | | 250 | |
| Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn | | | | |
| | 260 | | 265 | |
| Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala | | | | |
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| Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys | | | | |
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<210> 6179

<211> 2940

<212> DNA

<213> Homo sapiens

<400> 6179

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<211> 751

<212> PRT

<213> Homo sapiens

<400> 6180

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Val | Thr | Met | Asn | Phe | Ile | Trp | Pro | Phe | Leu | Met | Asn | Cys | Thr | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Trp | Arg | Xaa | Tyr | Leu | Thr | Asp | Glu | Phe | Ala | Lys | Gly | Arg | Lys | Val | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Leu | Tyr | Glu | Leu | Val | Gln | Tyr | Ala | Gly | Asn | Ile | Ile | Pro | Arg | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Tyr | Leu | Leu | Ile | Thr | Val | Gly | Val | Val | Tyr | Val | Lys | Ser | Phe | Pro | Gln |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ser | Arg | Lys | Asp | Ile | Leu | Lys | Asp | Leu | Val | Glu | Met | Cys | Arg | Gly | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Gln | His | Pro | Leu | Arg | Gly | Leu | Phe | Leu | Arg | Asn | Tyr | Leu | Leu | Gln | Cys |
| | | 100 | | | | | | 105 | | | | | | 110 | |
| Thr | Arg | Asn | Ile | Leu | Pro | Asp | Glu | Gly | Glu | Pro | Thr | Asp | Glu | Glu | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Thr | Gly | Asp | Ile | Ser | Asp | Ser | Met | Asp | Phe | Val | Leu | Leu | Asn | Phe | Ala |
| | 130 | | | | | | 135 | | | | 140 | | | | |
| Glu | Met | Asn | Lys | Leu | Trp | Val | Arg | Met | Gln | His | Gln | Gly | His | Ser | Arg |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Asp | Arg | Glu | Lys | Arg | Glu | Arg | Glu | Arg | Gln | Glu | Leu | Arg | Ile | Leu | Val |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Gly | Thr | Asn | Leu | Val | Arg | Leu | Ser | Xaa | Ser | Trp | Arg | Cys | Lys | Cys | Gly |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Thr | Leu | Gln | Gln | Ile | Val | Leu | Thr | Gly | Ile | Leu | Glu | Gln | Val | Val | Asn |

| | | |
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| 195 | 200 | 205 |
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| 210 | 215 | 220 |
| Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg | | |
| 225 | 230 | 235 |
| Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile | | |
| 245 | 250 | 255 |
| Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro | | |
| 260 | 265 | 270 |
| Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val | | |
| 275 | 280 | 285 |
| Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val | | |
| 290 | 295 | 300 |
| Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp | | |
| 305 | 310 | 315 |
| Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe | | |
| 325 | 330 | 335 |
| Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys | | |
| 340 | 345 | 350 |
| Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile | | |
| 355 | 360 | 365 |
| Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe | | |
| 370 | 375 | 380 |
| Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val | | |
| 385 | 390 | 395 |
| Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile | | |
| 405 | 410 | 415 |
| Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val | | |
| 420 | 425 | 430 |
| Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly | | |
| 435 | 440 | 445 |
| Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu | | |
| 450 | 455 | 460 |
| Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg | | |
| 465 | 470 | 475 |
| Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala | | |
| 485 | 490 | 495 |
| Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn | | |
| 500 | 505 | 510 |
| Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile | | |
| 515 | 520 | 525 |
| Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala | | |
| 530 | 535 | 540 |
| Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr | | |
| 545 | 550 | 555 |
| Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp | | |
| 565 | 570 | 575 |
| Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu | | |
| 580 | 585 | 590 |
| Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln | | |
| 595 | 600 | 605 |
| Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg | | |
| 610 | 615 | 620 |
| Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys | | |

| | | | | | | |
|---|---|-----|-----|-----|-----|-----|
| 625 | | 630 | | 635 | | 640 |
| Asn Gly Glu Glu Leu | His Gly Gly Lys Arg Val Met Glu Cys Leu Lys | | | | | |
| | 645 | | 650 | | 655 | |
| Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val | | | | | | |
| | 660 | | 665 | | 670 | |
| Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys | | | | | | |
| | 675 | | 680 | | 685 | |
| Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys | | | | | | |
| | 690 | | 695 | | 700 | |
| Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln | | | | | | |
| 705 | | 710 | | 715 | | 720 |
| Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg | | | | | | |
| | 725 | | 730 | | 735 | |
| Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu | | | | | | |
| | 740 | | 745 | | 750 | |

<210> 6181
 <211> 1135
 <212> DNA
 <213> Homo sapiens

<400> 6181
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 cccaccacgc cctattttct cggggacgca cagaaacatg atgtggaagt gctggaacgg
 180
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 240
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 300
 gtcaatcagg gggtttgtgt tcccaggaac ttaggaagt gcccacggac gtaccgcttg
 360
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 420
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 480
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 720
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 780
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 900
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 960

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 1020
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<210> 6182

<211> 236

<212> PRT

<213> Homo sapiens

<400> 6182

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Arg | Tyr | Ser | Trp | Ser | Gly | Met | Gly | Arg | Ile | His | Lys | Gly | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Glu | Gln | Gly | Arg | Tyr | Leu | Asn | Ser | Arg | Pro | Ser | Ile | Gln | Lys | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Phe | Phe | Leu | Pro | Asp | Leu | Pro | Thr | Thr | Pro | Tyr | Phe | Ser | Arg |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Asp | Ala | Gln | Lys | His | Asp | Val | Glu | Val | Leu | Glu | Arg | Asn | Phe | Gln | Thr |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ile | Leu | Cys | Glu | Phe | Glu | Thr | Leu | Tyr | Lys | Ala | Phe | Ser | Asn | Cys | Ser |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Pro | Gln | Gly | Trp | Lys | Met | Asn | Ser | Thr | Pro | Ser | Gly | Glu | Trp | Phe |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Thr | Phe | Tyr | Leu | Val | Asn | Gln | Gly | Val | Cys | Val | Pro | Arg | Asn | Cys | Arg |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Lys | Cys | Pro | Arg | Thr | Tyr | Arg | Leu | Leu | Gly | Ser | Leu | Arg | Thr | Cys | Ile |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Gly | Asn | Asn | Val | Phe | Gly | Asn | Ala | Cys | Ile | Ser | Val | Leu | Ser | Pro | Gly |
| | 130 | | | | 135 | | | | | 140 | | | | | |
| Thr | Val | Ile | Thr | Glu | His | Tyr | Gly | Pro | Thr | Asn | Ile | Arg | Ile | Arg | Cys |
| 145 | | | | 150 | | | | 155 | | | | | | 160 | |
| His | Leu | Gly | Leu | Lys | Thr | Pro | Asn | Gly | Cys | Glu | Leu | Val | Val | Gly | Gly |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Glu | Pro | Gln | Cys | Trp | Ala | Glu | Gly | Arg | Cys | Leu | Leu | Phe | Asp | Asp | Ser |
| | | 180 | | | | 185 | | | | | | 190 | | | |
| Phe | Leu | His | Ala | Ala | Phe | His | Glu | Gly | Ser | Ala | Glu | Asp | Gly | Pro | Arg |
| | 195 | | | | | 200 | | | | | 205 | | | | |
| Val | Val | Phe | Met | Val | Asp | Leu | Trp | His | Pro | Asn | Val | Ala | Ala | Ala | Glu |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Arg | Gln | Ala | Leu | Asp | Phe | Ile | Phe | Ala | Pro | Gly | Arg | | | | |
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<211> 2530

<212> DNA

<213> Homo sapiens

<400> 6183

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 120

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 1920
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 1980
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 2160
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 2400
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<210> 6184

<211> 308

<212> PRT

<213> Homo sapiens

<400> 6184

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| Arg | Ala | Ser | Thr | Pro | Tyr | Leu | Arg | Pro | Cys | Leu | Arg | Glu | Leu | Arg | Gly |
| 1 | | | | 5 | | | | 10 | | | | 15 | | | |
| Leu | Gly | Pro | Gly | Pro | Val | His | Gly | Arg | Asp | Pro | Gly | Pro | Gly | Gly | Pro |
| | | 20 | | | | | 25 | | | | 30 | | | | |
| Gly | Met | Gly | Asn | Arg | Gly | Gly | Phe | Arg | Gly | Gly | Phe | Gly | Ser | Gly | Ile |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Gly | Arg | Gly | Arg | Gly | Arg | Gly | Arg | Gly | Arg | Gly | Arg | Gly | Arg | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Arg | Gly | Gly | Lys | Ala | Glu | Asp | Lys | Glu | Trp | Met | Pro | Val | Thr | Lys |
| 65 | | | | 70 | | | | 75 | | | | | | 80 | |
| Leu | Gly | Arg | Leu | Val | Lys | Asp | Met | Lys | Ile | Lys | Ser | Leu | Glu | Glu | Ile |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Tyr | Leu | Phe | Ser | Leu | Pro | Ile | Lys | Glu | Ser | Glu | Ile | Ile | Asp | Phe | Phe |
| | | 100 | | | | | 105 | | | | | | 110 | | |
| Leu | Gly | Ala | Ser | Leu | Lys | Asp | Glu | Val | Leu | Lys | Ile | Met | Pro | Val | Gln |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Lys | Gln | Thr | Arg | Ala | Gly | Gln | Arg | Thr | Arg | Phe | Lys | Ala | Phe | Val | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Gly | Asp | Tyr | Asn | Gly | His | Val | Gly | Leu | Gly | Val | Lys | Cys | Ser | Lys |

145 150 155 160
 Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
 165 170 175
 Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
 180 185 190
 His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
 195 200 205
 Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
 210 215 220
 Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
 225 230 235 240
 Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
 245 250 255
 Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
 260 265 270
 Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
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 Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
 290 295 300
 Val Ala Thr Thr
 305

<210> 6185

<211> 1231

<212> DNA

<213> Homo sapiens

<400> 6185

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 1140
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<210> 6186

<211> 133

<212> PRT

<213> Homo sapiens

<400> 6186

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| Val | Arg | Ser | Arg | Asp | Ile | Ser | Arg | Glu | Glu | Trp | Lys | Gly | Ser | Glu | Thr |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Tyr | Ser | Pro | Asn | Thr | Ala | Tyr | Gly | Val | Asp | Phe | Leu | Val | Pro | Val | Met |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Tyr | Ile | Cys | Arg | Ile | Cys | His | Lys | Phe | Tyr | His | Ser | Asn | Ser | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Gln | Leu | Ser | His | Cys | Lys | Ser | Leu | Gly | His | Phe | Glu | Asn | Leu | Gln |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Lys | Tyr | Lys | Ala | Ala | Lys | Asn | Pro | Ser | Pro | Thr | Thr | Arg | Pro | Val | Ser |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Arg | Arg | Cys | Ala | Ile | Asn | Ala | Arg | Asn | Ala | Leu | Thr | Ala | Leu | Phe | Thr |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Ser | Gly | Arg | Pro | Pro | Ser | Gln | Pro | Asn | Thr | Gln | Asp | Lys | Thr | Pro |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Ser | Lys | Val | Thr | Ala | Arg | Pro | Ser | Gln | Pro | Pro | Leu | Pro | Arg | Arg | Ser |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Thr | Arg | Leu | Lys | Thr | | | | | | | | | | | |
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<210> 6187

<211> 909

<212> DNA

<213> Homo sapiens

<400> 6187

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 180

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 300
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 420
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 780
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 909

<210> 6188

<211> 227

<212> PRT

<213> Homo sapiens

<400> 6188

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| Met | Gly | Trp | Thr | Met | Arg | Leu | Val | Thr | Ala | Ala | Leu | Leu | Leu | Gly | Leu |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Met | Met | Val | Val | Thr | Gly | Asp | Glu | Asp | Glu | Asn | Ser | Pro | Cys | Ala | His |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Glu | Ala | Leu | Leu | Asp | Glu | Asp | Thr | Leu | Phe | Cys | Gln | Gly | Leu | Glu | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Tyr | Pro | Glu | Leu | Gly | Asn | Ile | Gly | Cys | Lys | Val | Val | Pro | Asp | Cys |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Asn | Asn | Tyr | Arg | Gln | Lys | Ile | Thr | Ser | Trp | Met | Glu | Pro | Ile | Val | Lys |
| 65 | | | | | 70 | | | | 75 | | | | 80 | | |
| Phe | Pro | Gly | Ala | Val | Tyr | Gly | Ala | Thr | Tyr | Ile | Leu | Val | Met | Val | Asp |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Pro | Asp | Ala | Pro | Ser | Arg | Ala | Glu | Pro | Arg | Gln | Arg | Phe | Trp | Arg | His |
| | | | 100 | | | | | 105 | | | | 110 | | | |
| Trp | Leu | Val | Thr | Asp | Ile | Lys | Gly | Ala | Asp | Leu | Lys | Lys | Gly | Lys | Ile |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Gly | Gln | Glu | Leu | Ser | Ala | Tyr | Gln | Ala | Pro | Ser | Pro | Pro | Ala | His |
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| Val | Ile | Ser | Leu | Leu | Pro | Lys | Glu | Asn | Lys | Thr | Arg | Gly | Ser | Trp | Lys |

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| Asn | Thr | His | Arg | Ala | Ile | Glu | Ser | Asn | Ser | Gln | Thr | Ser | Pro | Leu | Asn |
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| Ala | Glu | Val | Val | Gln | Tyr | Ala | Lys | Glu | Val | Val | Asp | Phe | Ser | Ser | His |
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| Tyr | Gly | Ser | Glu | Asn | Ser | Met | Ser | Tyr | Thr | Met | Trp | Asn | Leu | Ala | Gly |
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| Leu | Thr | Phe | Glu | Gln | Gln | Val | Tyr | Pro | Thr | Ala | Val | His | Val | Leu | Glu |
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| Thr | Tyr | His | Pro | Gly | Ala | Val | Ile | Arg | Ile | Leu | Ala | Cys | Ser | Ala | Asn |
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| Pro | Tyr | Ser | Pro | Asn | Pro | Pro | Ala | Glu | Val | Arg | Trp | Glu | Ile | Leu | Trp |

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| Pro | Cys | Ile | Lys | Gln | Ile | Asn | Phe | Pro | Thr | Asn | Leu | Ile | Arg | Leu | Glu | | | | | | | | | | | | | | | | | | | | | | | | |
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| Leu | His | Gly | Val | Lys | Asp | Lys | Pro | Val | Leu | Ser | Leu | Lys | Thr | Ser | Leu | | | | | | | | | | | | | | | | | | | | | | | | |
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| Ile | Asp | Met | Asn | Asp | Ile | Glu | Asp | Asp | Ala | Tyr | Ala | Glu | Lys | Asp | Gly | | | | | | | | | | | | | | | | | | | | | | | | |
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| Glu | Gly | Pro | Asn | Asn | Gly | Tyr | Phe | Asp | Lys | Leu | Pro | Tyr | Glu | Leu | Ile | | | | | | | | | | | | | | | | | | | | | | | | |
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| Gln | Leu | Ile | Leu | Asn | His | Leu | Thr | Leu | Pro | Asp | Leu | Cys | Arg | Leu | Ala | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 290 | | | | 295 | | | | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gln | Thr | Cys | Lys | Leu | Leu | Ser | Gln | His | Cys | Cys | Asp | Pro | Leu | Gln | Tyr | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | 325 | | | | 330 | | | | 335 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | 340 | | | | 345 | | | | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ser | Trp | Thr | Gly | Asn | Arg | Gly | Phe | Ile | Ser | Val | Ala | Gly | Phe | Ser | Arg | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 355 | | | | 360 | | | | 365 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phe | Leu | Lys | Val | Cys | Gly | Ser | Glu | Leu | Val | Arg | Leu | Glu | Leu | Ser | Cys | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 370 | | | | 375 | | | | 380 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Pro | Asn | Leu | Gln | Ala | Leu | Asn | Leu | Ser | Ser | Cys | Asp | Lys | Leu | Pro | Pro | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 405 | | | | 410 | | | | 415 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gln | Ala | Phe | Asn | His | Ile | Ala | Lys | Leu | Cys | Ser | Leu | Lys | Arg | Leu | Val | | | | | | | | | | | | | | | | | | | | | | | | |
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| Leu | Tyr | Arg | Thr | Lys | Val | Glu | Gln | Thr | Ala | Leu | Leu | Ser | Ile | Leu | Asn | | | | | | | | | | | | | | | | | | | | | | | | |
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| Leu | Arg | Thr | Leu | Asp | Leu | Trp | Arg | Cys | Lys | Asn | Ile | Thr | Glu | Asn | Gly | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 485 | | | | 490 | | | | 495 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ile | Ala | Glu | Leu | Ala | Ser | Gly | Cys | Pro | Leu | Leu | Glu | Glu | Leu | Asp | Leu | | | | | | | | | | | | | | | | | | | | | | | | |
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| Gly | Trp | Cys | Pro | Thr | Leu | Gln | Ser | Ser | Thr | Gly | Cys | Phe | Thr | Arg | Leu | | | | | | | | | | | | | | | | | | | | | | | | |
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| Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly | | | |
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| Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln | | | |
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| Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys | | | |
| | 85 | 90 | 95 |
| Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr | | | |
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<211> 164

<212> PRT

<213> Homo sapiens

<400> 6200

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| Phe | Trp | Glu | Glu | Gly | Ser | Ala | Pro | Arg | Pro | Gln | Glu | Ser | Arg | Gln | Arg |
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| Pro | Pro | Lys | Pro | Asp | Cys | Gln | Gln | Lys | Pro | Ser | Pro | Ser | Glu | Gly | Gln |
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| Val | Gly | Val | Pro | Xaa | Arg | Ser | Pro | His | Pro | Gln | Gly | Gly | Phe | Thr | His |
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| Cys | Pro | Val | Pro | Gly | Met | Pro | Gly | Gly | Arg | Pro | Leu | Cys | Cys | Cys | His |
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| Cys | Cys | Gln | His | Cys | Pro | Ala | Cys | Glu | Ala | Arg | Arg | Ser | Pro | Cys | Pro |
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| Thr | Arg | Cys | Cys | Ser | Ser | Asp | Pro | Cys | Cys | Glu | Glu | Trp | Asp | Ser | |
| | | 100 | | | | | 105 | | | | | 110 | | | |
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| Gly | Glu | Ala | Ala | Thr | Leu | Pro | Ser | Gln | Arg | Asp | Ala | Leu | Pro | Cys | Phe |
| 130 | | | | | | 135 | | | | | 140 | | | | |
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<213> Homo sapiens

<400> 6204

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| Ser | Phe | Trp | Glu | Val | Gly | Asn | Tyr | Lys | Arg | Thr | Val | Lys | Arg | Ile | Asp |
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| Asp | Gly | His | Arg | Leu | Cys | Ser | Asp | Leu | Met | Asn | Cys | Leu | His | Glu | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Arg | Ile | Glu | Lys | Ala | Tyr | Ala | Gln | Gln | Leu | Thr | Glu | Trp | Ala | Arg |
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| Arg | Trp | Arg | Gln | Leu | Val | Glu | Lys | Gly | Pro | Gln | Tyr | Gly | Thr | Val | Glu |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Lys | Ala | Trp | Met | Ala | Phe | Met | Ser | Glu | Ala | Glu | Arg | Val | Ser | Glu | Leu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| His | Leu | Glu | Val | Lys | Ala | Ser | Leu | Met | Asn | Asp | Asp | Phe | Glu | Lys | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
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| Trp | Ala | Lys | Lys | Leu | Lys | Glu | Val | Glu | Ala | Ala | Lys | Lys | Ala | His | His |
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| Ala | Ala | Cys | Lys | Glu | Glu | Lys | Leu | Ala | Ile | Ser | Arg | Glu | Ala | Asn | Ser |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Lys | Ala | Asp | Pro | Ser | Leu | Asn | Pro | Glu | Gln | Leu | Lys | Lys | Leu | Gln | Asp |
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| Lys | Ile | Glu | Lys | Cys | Lys | Gln | Asp | Val | Leu | Lys | Thr | Lys | Glu | Lys | Tyr |
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| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asn | Met | Glu | Gln | Val | Phe | Glu | Gln | Cys | Gln | Gln | Phe | Glu | Glu | Lys | Arg |
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| Leu | Arg | Phe | Phe | Arg | Glu | Val | Leu | Leu | Glu | Val | Gln | Lys | His | Leu | Asp |

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| Lys | Ser | Pro | Phe | Ser | Arg | Leu | Gly | Ser | Thr | Glu | Ala | Asp | Leu | Cys | Gln | | | | | | |
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| Ala | Leu | Thr | Val | Ser | Ala | Leu | Leu | Phe | Ser | Ser | Phe | Leu | Trp | Phe | Ala | | | | | | |
| | | | | 180 | | | | | | | | 185 | | | | | | | | 190 | |
| Ile | Arg | Cys | Gly | Cys | Ser | Leu | Asp | Arg | Lys | Gly | Lys | Tyr | Thr | Leu | Thr | | | | | | |
| | | | | 195 | | | | | | | | 200 | | | | | | | | 205 | |
| Pro | Arg | Ala | Cys | Gly | Arg | Gln | Pro | Gln | Glu | Pro | Ser | Leu | Leu | Arg | Cys | | | | | | |
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| Ser | Gln | Gly | Gly | Pro | Thr | His | Cys | Leu | His | Ser | Glu | Ala | Val | Ala | Ile | | | | | | |
| | | | | 225 | | | | | | | | 230 | | | | | | | | 235 | |
| Gly | Pro | Arg | Gly | Cys | Ser | Gly | Ser | Leu | Arg | Trp | Leu | Gln | Glu | Ser | Asp | | | | | | |
| | | | | 245 | | | | | | | | 250 | | | | | | | | 255 | |
| Ala | Ala | Pro | Leu | Pro | Leu | Ser | Cys | His | Leu | Ala | Ala | His | Arg | Ala | Leu | | | | | | |
| | | | | 260 | | | | | | | | 265 | | | | | | | | 270 | |
| Gln | Gly | Arg | Ser | Arg | Gly | Gly | Leu | Ser | Gly | Cys | Pro | Glu | Arg | Gly | Leu | | | | | | |
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<213> Homo sapiens
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<212> PRT
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Ser Pro Ser Leu Arg Gly Thr His Leu Leu Phe Leu Pro Gln Ala Asp
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Val Val Asp Glu Ala Ile Asp Ser Leu Ala Arg Thr Lys Gly Val Met
50 55 60
Lys Pro Pro Cys Ser Glu Gly Ser Pro Trp Arg Cys Pro His Phe Thr
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Cys Trp Val Leu Gln Ala Arg Lys Pro Gly Ser Gly Gly Thr Arg Glu
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Arg Gln Ala Cys Val Trp Thr Ser Ala Gly Ala Ala Ala Leu Arg Leu
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Ala Arg Glu Arg Gln Arg Trp Val Phe Arg Phe His Ala Tyr Val Trp
115 120 125
Ala His Ser Gln His Gly Arg Val Ser Ala Val Leu Val Leu Thr Leu
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<213> Homo sapiens

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2163

<210> 6212

<211> 209

<212> PRT

<213> Homo sapiens

<400> 6212

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Gln | Ile | Pro | Asp | Thr | Arg | Arg | Glu | Leu | Ala | Glu | Leu | Val | Lys | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Gln | Glu | Leu | Ala | Glu | Thr | Leu | Ala | Asn | Leu | Glu | Arg | Gln | Ile | Tyr |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ala | Phe | Glu | Gly | Ser | Tyr | Leu | Glu | Asp | Thr | Gln | Met | Tyr | Gly | Asn | Ile |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Ile | Arg | Gly | Trp | Xaa | Ser | Val | Ser | Asp | Gln | Pro | Xaa | Lys | Asn | Ser | Asn |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Lys | Asn | Asp | Arg | Arg | Asn | Arg | Lys | Phe | Lys | Glu | Ala | Glu | Arg | Leu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Phe | Ser | Lys | Ser | Ser | Val | Thr | Ser | Ala | Ala | Ala | Val | Ser | Ala | Leu | Ala |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Gly | Val | Gln | Asp | Gln | Leu | Ile | Glu | Lys | Arg | Glu | Pro | Gly | Ser | Gly | Thr |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Glu | Ser | Asp | Thr | Ser | Pro | Asp | Phe | His | Asn | Gln | Glu | Asn | Glu | Pro | Ser |
| | | | 130 | | | | 135 | | | | | 140 | | | |
| Gln | Glu | Asp | Pro | Glu | Asp | Leu | Asp | Gly | Ser | Val | Gln | Gly | Val | Lys | Pro |
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| Gln | Lys | Ala | Ala | Ser | Ser | Thr | Ser | Ser | Gly | Ser | His | His | Ser | Ser | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Lys | Lys | Arg | Lys | Asn | Lys | Asn | Arg | His | Ser | Pro | Ser | Gly | Met | Phe | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Tyr | Asp | Phe | Glu | Ile | Asp | Leu | Lys | Leu | Asn | Lys | Lys | Pro | Arg | Ala | Asp |
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Tyr

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<211> 1160

<212> DNA

<213> Homo sapiens

<400> 6213

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<210> 6214

<211> 101

<212> PRT

<213> Homo sapiens

<400> 6214

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| 1 | | | | 5 | | | | | 10 | | | | 15 | | |
| Ser | Thr | Asn | Pro | Pro | Val | Val | Trp | Gly | Gly | Gln | Pro | Phe | Gly | Gly | Ala |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Glu | Pro | Ala | Xaa | Cys | Leu | His | Gln | Thr | Gly | Pro | His | Leu | Gly | Pro | Pro |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Pro | Pro | Pro | Pro | Pro | Thr | Pro | Pro | Pro | Thr | Cys | Ile | Ala | Gln | Ile | Gln |
| | | 50 | | | 55 | | | | 60 | | | | | | |
| Val | Met | Met | Glu | Gln | Ile | Arg | Pro | Trp | His | Ser | Arg | Met | Lys | Arg | Arg |
| 65 | | | | 70 | | | | | 75 | | | | 80 | | |
| Lys | Gly | Val | Met | Glu | Gly | Gln | Ser | Leu | Glu | Pro | Ala | Ala | Ser | Ser | Gly |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Pro | Leu | Pro | Pro | Thr | Asp | | | | | | | | | | |
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 <213> Homo sapiens

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<210> 6216
 <211> 87
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
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<210> 6217
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 <212> DNA
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<400> 6217

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<210> 6218

<211> 133

<212> PRT

<213> Homo sapiens

<400> 6218

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| Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly | | | |
| | 35 | 40 | 45 |
| Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln | | | |
| | 50 | 55 | 60 |
| Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser | | | |
| 65 | 70 | 75 | 80 |
| Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr | | | |
| | 85 | 90 | 95 |
| Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro | | | |
| | 100 | 105 | 110 |
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<210> 6219

<211> 2495

<212> DNA

<213> Homo sapiens

<400> 6219

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 Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
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 Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
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 Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
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 Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
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 <213> Homo sapiens

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<210> 6222

<211> 330

<212> PRT

<213> Homo sapiens

<400> 6222

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Lys | Ile | Ser | Val | Val | Met | Gln | Glu | Ser | Ala | Glu | Lys | Leu | Ser | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Leu | His | Lys | Cys | Lys | Glu | Phe | Val | Asp | Ser | Cys | Arg | Leu | Thr | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Thr | Ser | Gly | Asp | Glu | Tyr | Ser | Arg | Gly | Phe | Leu | Gln | Asn | Leu | Asn |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Ile | Gln | Asp | Gln | Asn | Ala | Gln | Thr | Arg | Trp | Lys | Gln | Gly | Arg | Tyr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Asp | Glu | Asp | Gly | Lys | Pro | Phe | Asn | Gln | Arg | Ser | Leu | Leu | Leu | Gly | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Arg | Ile | Leu | Thr | Arg | Ala | Lys | Ser | Tyr | Glu | Cys | Ser | Glu | Cys | Gly |

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Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
          145          150          155          160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Tyr
          165          170          175
Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
          180          185          190
Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
          195          200          205
Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
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Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
          245          250          255
Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
          260          265          270
Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
          275          280          285
Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
          290          295          300
Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
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<211> 944

<212> DNA

<213> Homo sapiens

<400> 6223

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 <211> 156
 <212> PRT
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 Gly Met Ile Pro Glu Gly Gly Gly Gly Asn Gln Glu Pro Arg Gln Gln
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 Pro Gln Pro Pro Pro Glu Glu Pro Ala Gln Ala Ala Met Glu Gly Pro
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 Gln Pro Glu Asn Met Gln Pro Arg Thr Arg Arg Thr Lys Phe Thr Leu
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<210> 6225
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 <212> DNA
 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 6226

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| Leu | Glu | Lys | Arg | Ser | Glu | Phe | Arg | Lys | Gln | Pro | Val | Gly | His | Ser | Arg |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Gln | Gly | Asp | Phe | Ile | Lys | Cys | Val | Glu | Gln | Lys | Thr | Asp | Ala | Leu | Gly |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Lys | Gln | Ser | Val | Asn | Arg | Gly | Phe | Thr | Lys | Asp | Lys | Thr | Leu | Ser | Ser |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ile | Phe | Asn | Ile | Glu | Met | Val | Lys | Glu | Lys | Thr | Ala | Glu | Glu | Ile | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gln | Ile | Trp | Gln | Gln | Tyr | Phe | Ala | Ala | Lys | Asp | Thr | Val | Tyr | Ala | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ile | Pro | Ala | Glu | Lys | Phe | Asp | Leu | Ile | Trp | Asn | Arg | Ala | Gln | Ser | Cys |
| | | 100 | | | | | 105 | | | | | | 110 | | |
| Pro | Thr | Phe | Leu | Cys | Ala | Leu | Pro | Arg | Arg | Glu | Gly | Tyr | Glu | Phe | Phe |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Val | Gly | Gln | Trp | Thr | Gly | Thr | Glu | Leu | His | Phe | Thr | Ala | Leu | Ile | Asn |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Gln | Thr | Arg | Gly | Glu | Ala | Ala | Ala | Ser | Gln | Leu | Ile | Leu | Tyr | His |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Tyr | Pro | Glu | Leu | Lys | Glu | Glu | Lys | Gly | Ile | Val | Leu | Met | Thr | Ala | Glu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Met | Asp | Ser | Thr | Phe | Leu | Asn | Val | Ala | Glu | Ala | Gln | Cys | Ile | Ala | Asn |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Gln | Val | Gln | Leu | Phe | Tyr | Ala | Thr | Asp | Arg | Lys | Glu | Thr | Tyr | Gly | Leu |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Val | Glu | Thr | Phe | Asn | Leu | Arg | Pro | Asn | Glu | Phe | Lys | Tyr | Met | Ser | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ile | Ala | Glu | Leu | Glu | Gln | Ser | Gly | Leu | Gly | Ala | Glu | Leu | Lys | Cys | Ala |
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<212> DNA

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<400> 6227

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<210> 6228

<211> 271

<212> PRT

<213> Homo sapiens

<400> 6228

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Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
35           40           45
Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Glu Gly Gly Glu Asn
50           55           60
Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
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<213> Homo sapiens
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<211> 944

<212> PRT

<213> Homo sapiens

<400> 6230

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| 1 | | | | 5 | | | | | 10 | | | | 15 | | |
| Pro | Asp | Arg | Trp | Asn | Ser | Ala | Phe | Thr | Arg | Lys | Asp | Glu | Ile | Ile | Thr |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Ser | Leu | Val | Ser | Ala | Leu | Asp | Ser | Met | Cys | Ser | Ala | Leu | Ser | Lys | Leu |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Asn | Ala | Glu | Val | Ala | Cys | Val | Ala | Val | His | Asp | Glu | Ser | Ala | Phe | Val |
| | 50 | | | | 55 | | | | 60 | | | | | | |
| Val | Gly | Thr | Glu | Lys | Gly | Arg | Met | Phe | Leu | Asn | Ala | Arg | Lys | Glu | Leu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Gln | Ser | Asp | Phe | Leu | Arg | Phe | Cys | Arg | Gly | Pro | Pro | Trp | Lys | Asp | Pro |
| | | 85 | | | | | | 90 | | | | | 95 | | |
| Glu | Ala | Glu | His | Pro | Lys | Lys | Val | Gln | Arg | Gly | Glu | Gly | Gly | Gly | Arg |
| | 100 | | | | | | 105 | | | | 110 | | | | |
| Ser | Leu | Pro | Arg | Ser | Ser | Leu | Glu | His | Gly | Ser | Asp | Val | Tyr | Leu | Leu |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Arg | Lys | Met | Val | Glu | Glu | Val | Phe | Asp | Val | Leu | Tyr | Ser | Glu | Ala | Leu |
| | 130 | | | | 135 | | | | 140 | | | | | | |
| Gly | Arg | Ala | Ser | Val | Val | Pro | Leu | Pro | Tyr | Glu | Arg | Leu | Leu | Arg | Glu |
| 145 | | | | 150 | | | | | 155 | | | | 160 | | |
| Pro | Gly | Leu | Leu | Ala | Val | Gln | Gly | Leu | Pro | Glu | Gly | Leu | Ala | Phe | Arg |

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 Ser His Arg Ile Arg Phe Lys Leu Lys Arg Pro Leu Glu Asp Gly Gly
 195 200 205
 Arg Asp Ser Lys Ala Leu Val Glu Leu Asn Gly Val Ser Leu Ile Pro
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 225 230 235 240
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 245 250 255
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 275 280 285
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 Cys Gly Gln Lys Pro Thr Gly Pro Gly Gly Pro Leu Ile Gln Asn Val
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 Pro Cys Thr Tyr Gly Val Pro Lys Leu Lys Arg Ile Leu Glu Glu Arg
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 Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe Asn Thr Arg
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 580 585 590
 Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly Leu Pro Glu

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  625              630              635              640
Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
      645              650              655
Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
      660              665              670
Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
      675              680              685
Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
      690              695              700
Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
  705              710              715              720
Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
      725              730              735
Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
      740              745              750
Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
      755              760              765
Leu Ile Pro Lys Pro Asp Glu Asp Asp Ala Asn Arg Leu Gly Glu Lys
  770              775              780
Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
  785              790              795              800
Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
      805              810              815
Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
      820              825              830
Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
      835              840              845
Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
      850              855              860
Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
  865              870              875              880
Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
      885              890              895
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
      900              905              910
Val Ala Ser Ala Asn Gln Ile Ser Leu Val Gln Trp Pro Met Tyr Met
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<211> 471

<212> DNA

<213> Homo sapiens

<400> 6231

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<210> 6232

<211> 138

<212> PRT

<213> Homo sapiens

<400> 6232

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Asp | Arg | Thr | Arg | Pro | Cys | Leu | Phe | Lys | Lys | Lys | Lys | Lys | Ala | Gln |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Lys | Lys | Ser | Met | Leu | Gly | Gln | Lys | Ser | Gly | Pro | Ser | Gly | Leu | Leu | Thr |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Trp | Arg | Arg | Lys | Arg | Gly | Pro | Lys | Pro | Pro | Val | Ala | Pro | Ile | Ser | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Asn | Gly | Thr | Thr | Pro | Arg | Gly | Glu | Pro | Pro | Pro | Asn | His | Ser | Ser |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Lys | Lys | Gly | Thr | Lys | Lys | Trp | Ala | Leu | Asp | Phe | Ser | Thr | Pro | Glu | Thr |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Gln | Phe | Pro | Pro | Pro | Gly | Arg | Pro | Phe | Leu | Gly | Ile | Pro | Thr | Trp | Asp |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Pro | Thr | Trp | Ala | Tyr | Ser | Gly | Pro | Tyr | Leu | Phe | Leu | Val | Gly | Ile | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Pro | Phe | Pro | Phe | Pro | Pro | Pro | Ser | Asn | | | | | | |
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<211> 894

<212> DNA

<213> Homo sapiens

<400> 6233

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<210> 6234

<211> 230

<212> PRT

<213> Homo sapiens

<400> 6234

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| Met | Ser | Phe | Lys | Arg | Glu | Gly | Asp | Asp | Trp | Ser | Gln | Leu | Asn | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Lys | Arg | Arg | Val | Gly | Asp | Leu | Leu | Ala | Ser | Tyr | Ile | Pro | Glu | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ala | Leu | Met | Leu | Arg | Asp | Gly | Arg | Phe | Ala | Cys | Ala | Ile | Cys | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| His | Arg | Pro | Val | Leu | Asp | Thr | Leu | Ala | Met | Leu | Thr | Ala | His | Arg | Ala |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Gly | Lys | Lys | His | Leu | Ser | Ser | Leu | Gln | Leu | Phe | Tyr | Gly | Lys | Lys | Gln |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Gly | Lys | Glu | Arg | Lys | Gln | Asn | Pro | Lys | His | Gln | Asn | Glu | Leu | Arg |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Glu | Glu | Thr | Lys | Ala | Glu | Ala | Pro | Leu | Leu | Thr | Gln | Thr | Arg | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Thr | Gln | Ser | Ala | Leu | His | Arg | Ala | Pro | His | Tyr | Asn | Ser | Cys | Cys |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Arg | Arg | Lys | Tyr | Arg | Pro | Glu | Ala | Pro | Gly | Pro | Ser | Val | Ser | Leu | Ser |
| | | | 130 | | | 135 | | | | 140 | | | | | |
| Pro | Met | Pro | Pro | Ser | Glu | Val | Lys | Leu | Gln | Ser | Gly | Lys | Ile | Ser | Arg |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Glu | Pro | Glu | Pro | Ala | Ala | Gly | Pro | Gln | Ala | Glu | Glu | Ser | Ala | Thr | Val |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Ala | Pro | Ala | Pro | Met | Ser | Pro | Thr | Arg | Arg | Arg | Ala | Leu | Asp | His |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Tyr | Leu | Thr | Leu | Arg | Ser | Ser | Gly | Trp | Ile | Pro | Asp | Gly | Arg | Gly | Arg |
| | | 195 | | | | 200 | | | | | 205 | | | | |
| Trp | Val | Lys | Asp | Glu | Asn | Val | Glu | Phe | Asp | Ser | Asp | Glu | Glu | Glu | Pro |

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Pro Asp Leu Pro Leu Asp
225 230

220

<210> 6235
<211> 3427
<212> DNA
<213> Homo sapiens

<400> 6235

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<210> 6236

<211> 820

<212> PRT

<213> Homo sapiens

<400> 6236

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Arg | Asp | Pro | Val | Arg | Asp | Phe | Pro | Phe | Glu | Leu | Ile | Pro | Glu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Glu | Gly | Gly | Leu | Pro | Gly | Pro | Trp | Ala | Leu | His | Arg | Gly | Arg | Lys |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Lys | Ala | Thr | Gly | Ser | Pro | Val | Ser | Ile | Phe | Val | Tyr | Asp | Val | Lys | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Ala | Glu | Glu | Gln | Thr | Gln | Val | Ala | Lys | Ala | Phe | Lys | Arg | Phe | |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Lys | Thr | Leu | Arg | His | Pro | Asn | Ile | Leu | Ala | Tyr | Ile | Asp | Gly | Leu | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Glu | Lys | Cys | Leu | His | Val | Val | Thr | Glu | Ala | Val | Thr | Pro | Leu | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Tyr | Leu | Lys | Ala | Arg | Val | Glu | Ala | Gly | Gly | Leu | Lys | Glu | Leu | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Ser | Trp | Gly | Leu | His | Gln | Ile | Val | Lys | Ala | Leu | Ser | Phe | Leu | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asn | Asp | Cys | Ser | Leu | Ile | His | Asn | Asn | Val | Cys | Met | Ala | Ala | Val | Phe |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Val | Asp | Arg | Ala | Gly | Glu | Trp | Lys | Leu | Gly | Gly | Leu | Asp | Tyr | Met | Tyr |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Ser | Ala | Gln | Gly | Asn | Gly | Gly | Gly | Pro | Pro | Arg | Lys | Gly | Ile | Pro | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Leu | Glu | Gln | Tyr | Asp | Pro | Pro | Glu | Leu | Ala | Asp | Ser | Ser | Gly | Arg | Val |
| | | 195 | | | | | 200 | | | | | | 205 | | |
| Val | Arg | Glu | Lys | Trp | Ser | Ala | Asp | Met | Trp | Arg | Leu | Gly | Cys | Leu | Ile |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Trp | Glu | Val | Phe | Asn | Gly | Pro | Leu | Pro | Arg | Ala | Ala | Ala | Leu | Arg | Asn |

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 675 680 685
 Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
 690 695 700
 Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
 705 710 715 720
 Pro Ser Ser Gln Glu Pro Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
 725 730 735
 Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
 740 745 750
 Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
 755 760 765
 Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
 770 775 780
 Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Glu Met Glu Ala
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 Arg Lys Leu Asp
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<210> 6237

<211> 494

<212> DNA

<213> Homo sapiens

<400> 6237

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<210> 6238

<211> 141

<212> PRT

<213> Homo sapiens

<400> 6238

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| | | | |
|---|-----|-----|----|
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| Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val | | | |
| 20 | 25 | 30 | |
| Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met | | | |
| 35 | 40 | 45 | |
| Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala | | | |
| 50 | 55 | 60 | |
| Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly | | | |
| 65 | 70 | 75 | 80 |
| His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg | | | |
| 85 | 90 | 95 | |
| His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro | | | |
| 100 | 105 | 110 | |
| Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys | | | |
| 115 | 120 | 125 | |
| Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly | | | |
| 130 | 135 | 140 | |

<210> 6239

<211> 911

<212> DNA

<213> Homo sapiens

<400> 6239

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480
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900

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aaaaaaaaa a

911

<210> 6240

<211> 235

<212> PRT

<213> Homo sapiens

<400> 6240

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      20           25           30
Leu Glu Leu Leu Ser Pro Phe Gln Leu Tyr Phe Asn Pro His Leu Val
      35           40           45
Phe Arg Lys Phe Gln Val Trp Arg Leu Val Thr Asn Phe Leu Phe Phe
      50           55           60
Gly Pro Leu Gly Phe Ser Phe Phe Phe Asn Met Leu Phe Val Phe Arg
65           70           75           80
Tyr Cys Arg Met Leu Glu Glu Gly Ser Phe Arg Gly Arg Thr Ala Asp
      85           90           95
Phe Val Phe Met Phe Leu Phe Gly Gly Val Leu Met Thr Leu Leu Gly
      100          105          110
Leu Leu Gly Ser Leu Phe Phe Leu Gly Gln Ala Leu Met Ala Met Leu
      115          120          125
Val Tyr Val Trp Ser Arg Arg Ser Pro Arg Val Arg Val Asn Phe Phe
      130          135          140
Gly Leu Leu Thr Phe Gln Ala Pro Phe Leu Pro Trp Ala Leu Met Gly
145          150          155          160
Phe Ser Leu Leu Leu Gly Asn Ser Ile Leu Val Asp Leu Leu Gly Ile
      165          170          175
Ala Val Gly His Ile Tyr Tyr Phe Leu Glu Asp Val Phe Pro Asn Gln
      180          185          190
Pro Gly Gly Lys Arg Leu Leu Gln Thr Pro Gly Phe Leu Lys Leu Leu
      195          200          205
Leu Asp Ala Pro Ala Glu Asp Pro Asn Tyr Leu Pro Leu Pro Glu Glu
      210          215          220
Gln Pro Gly Pro His Leu Pro Pro Pro Gln Gln
225          230          235

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<210> 6241

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 6241

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ccaccgccgc cgccgccgcc gactcccgcg accccgacgt cctcggcgtc caacctggac
240

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 420
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<210> 6242

<211> 245

<212> PRT

<213> Homo sapiens

<400> 6242

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 35 40 45
 Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
 65 70 75 80
 Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
 85 90 95
 Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Leu Asp Thr Phe Glu Tyr
 100 105 110
 Gln Gly Leu Val Lys His Thr Gly Gly Cys His Cys Gly Ala Val Arg
 115 120 125
 Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
 130 135 140
 Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
 145 150 155 160
 Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
 165 170 175
 Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
 180 185 190
 Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
 195 200 205
 His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
 210 215 220
 Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
 225 230 235 240
 Asn Met Ser Lys Glu
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<210> 6243

<211> 326

<212> DNA

<213> Homo sapiens

<400> 6243

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 180
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<210> 6244

<211> 104

<212> PRT

<213> Homo sapiens

<400> 6244

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 Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
 35 40 45
 Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
 50 55 60
 Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
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 Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
 85 90 95
 Phe Leu Ser Phe Ser Pro Trp Arg
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<210> 6245

<211> 6609

<212> DNA

<213> Homo sapiens

<400> 6245

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<211> 1286

<212> PRT

<213> Homo sapiens

<400> 6246

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| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Glu | Asn | Met | Met | Gln | Arg | His | Glu | Glu | Ala | His | Glu | Lys | Gly | Lys | |
| | | 20 | | | | | 25 | | | | 30 | | | | |
| Ile | Leu | Ser | Glu | Gln | Lys | Ala | Met | Ile | Asn | Ala | Met | Asp | Ser | Lys | Ile |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Ser | Leu | Glu | Gln | Arg | Ile | Val | Glu | Leu | Ser | Glu | Ala | Asn | Lys | Leu |
| | 50 | | | | 55 | | | 60 | | | | | | | |
| Ala | Ala | Asn | Ser | Ser | Leu | Phe | Thr | Gln | Arg | Asn | Met | Lys | Ala | Gln | Glu |
| 65 | | | | 70 | | | | 75 | | | | | 80 | | |
| Glu | Met | Ile | Ser | Glu | Leu | Arg | Gln | Gln | Lys | Phe | Tyr | Leu | Glu | Thr | Gln |
| | | | 85 | | | | 90 | | | | | 95 | | | |
| Ala | Gly | Lys | Leu | Glu | Ala | Gln | Asn | Arg | Lys | Leu | Glu | Glu | Gln | Leu | Glu |
| | 100 | | | | | 105 | | | | | 110 | | | | |
| Lys | Ile | Ser | His | Gln | Asp | His | Ser | Asp | Lys | Asn | Arg | Leu | Leu | Glu | Leu |
| | 115 | | | | 120 | | | | | | 125 | | | | |
| Glu | Thr | Arg | Leu | Arg | Glu | Val | Ser | Leu | Glu | His | Glu | Glu | Gln | Lys | Leu |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Glu | Leu | Lys | Arg | Gln | Leu | Thr | Glu | Leu | Gln | Leu | Ser | Leu | Gln | Glu | Arg |

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 Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Glu Thr Thr Ala Glu Ala
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 Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu
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 Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln
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 Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp
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 Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu
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 His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu
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 Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys Lys
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 Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys
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 530 535 540
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 Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser
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 Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu

5433

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 Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
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<211> 497

<212> DNA

<213> Homo sapiens

<400> 6247

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 240
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<211> 142

<212> PRT

<213> Homo sapiens

<400> 6248

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Ala | Gly | Glu | Gly | Gln | Glu | Glu | Gly | Gly | Gly | Leu | Ala | Cys | Pro | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Ser | Gln | Arg | Leu | His | Gly | Gly | Pro | Cys | Pro | Gly | Gly | Ala | Pro | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Arg | Glu | Thr | Ala | Gly | Ser | Arg | Pro | Ala | Ala | Arg | Ser | Pro | Gly | Arg | Glu |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ile | Leu | Phe | Ile | Cys | Ala | Arg | Gly | Arg | Arg | Gly | Asn | Pro | Cys | Leu | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Ser | Gln | Arg | Arg | Val | Glu | Ala | Ala | His | Val | Leu | Gly | His | Arg | Glu |
| | | | 85 | | | | | | 90 | | | | 95 | | |
| Trp | Ser | Glu | Lys | Arg | Gln | Lys | Lys | Asp | Ile | Pro | Trp | Ser | Trp | Arg | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
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<212> DNA

<213> Homo sapiens

<400> 6249

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<210> 6250

<211> 245

<212> PRT

<213> Homo sapiens

<400> 6250

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| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Gly | Ile | Gly | Gln | Ala | Ala | Ala | Leu | Ala | Phe | Ala | Arg | Glu | Gly | Ala | Lys |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Val | Ile | Ala | Thr | Asp | Ile | Asn | Glu | Ser | Lys | Leu | Gln | Glu | Leu | Glu | Lys |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Tyr | Pro | Gly | Ile | Gln | Thr | Arg | Val | Leu | Asp | Val | Thr | Lys | Lys | Lys | Gln |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ile | Asp | Gln | Phe | Ala | Asn | Glu | Val | Glu | Arg | Leu | Asp | Val | Leu | Phe | Asn |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Val | Ala | Gly | Phe | Val | His | His | Gly | Thr | Val | Leu | Asp | Cys | Glu | Glu | Lys |
| | | | 85 | | | | 90 | | | | | | 95 | | |
| Asp | Trp | Asp | Phe | Ser | Met | Asn | Leu | Asn | Val | Arg | Ser | Met | Tyr | Leu | Met |
| | 100 | | | | | | 105 | | | | | 110 | | | |
| Ile | Lys | Ala | Phe | Leu | Pro | Lys | Met | Leu | Ala | Gln | Lys | Ser | Gly | Asn | Ile |
| | 115 | | | | | 120 | | | | 125 | | | | | |
| Ile | Asn | Met | Ser | Ser | Val | Ala | Ser | Ser | Val | Lys | Gly | Val | Val | Asn | Arg |
| | 130 | | | | | 135 | | | | 140 | | | | | |
| Cys | Val | Tyr | Ser | Thr | Thr | Lys | Ala | Ala | Val | Ile | Gly | Leu | Thr | Lys | Ser |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
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[illegible]

<210> 6251

<211> 1611

<212> DNA

<213> Homo sapiens

<400> 6251

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| 120 | tattgctgac | atgcaggaag | agtccccatg | tagtacaaaa | atatgtcttt | atacaaactt |
| 180 | ttttgtgact | ttttccgttt | ctttacaata | ggacttctct | cagtgtgtga | caccagtgta |
| 240 | gggctgaccc | atcctcctct | cctttgcttc | accaggaatg | tcatcagaca | catggcttga |
| 300 | ccttggaagg | gcccagtctg | tctgacaggg | ctttgcagac | ccggcggcta | ttgctttgaa |
| 360 | aaggaggaga | aagaccacgc | acgggcagca | gcctggaggg | acccggtggg | ctgctgagag |
| 420 | ggggctccgc | tgcgacgggc | cctggcccag | cttcaggccc | tcacaggagg | acagtcaagg |
| 480 | gctgggagcc | ctaggccgga | ctgcatttcc | gctcccgcat | gagactttct | atgaaataaa |
| 540 | tatagaaaag | agggcatccc | ccagccccac | agcacaagac | cctggccctc | agcgctggac |
| 600 | agctgagaca | gacgcaggct | cgctgctcag | ggggagtaag | tgctgggctc | cagtaggctc |
| 660 | ccacaggccc | actgaggcag | aggcatgagt | cgcccaagtg | ctggatgggg | catggggaga |
| 720 | aaggggctg | ggcagccctg | ctactgctgg | caagaggtgg | ccccattttt | tccagatggg |
| 780 | gaaactgagg | cacaaggagg | tttgggaact | tgcccaaggt | cactcacagt | gagtcagctt |
| 840 | tttaggggga | ggagagcggc | tcacactctg | ggaaacacag | tcacctcccc | actggggagc |
| 900 | agggccaggc | aggagggggc | tcagggccca | tgactgcctg | gaggggacac | tcagcctctc |
| 960 | tgaggacata | tggggggtag | gcctctgggg | aagggctctt | gcttggcatc | aggcagggcc |
| 1020 | aagtccagta | agggcaaggg | gagggggcat | tctggtgaga | acagcatttc | tggcaagacg |
| 1080 | ggcatccact | tcaaaatctc | ggctcaaaag | ggcagcaggg | ctgttctcaa | gccaggcagg |

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<210> 6252

<211> 100

<212> PRT

<213> Homo sapiens

<400> 6252

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| Met | Gly | Gly | Arg | Pro | Leu | Gly | Lys | Gly | Leu | Cys | Leu | Ala | Ser | Gly | Arg |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ala | Lys | Ser | Ser | Lys | Gly | Lys | Gly | Arg | Gly | His | Ser | Gly | Glu | Asn | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Ser | Gly | Lys | Thr | Gly | Ile | His | Phe | Lys | Ile | Ser | Ala | Gln | Lys | Gly |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Arg | Ala | Val | Leu | Lys | Pro | Gly | Arg | Gln | Gly | Pro | Pro | Ile | Pro | Thr |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Ile | Leu | Leu | Ser | Pro | Ser | Pro | Pro | Trp | Arg | Thr | Leu | Ala | Arg | Val | Tyr |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Arg | Glu | Ser | His | His | Ile | Tyr | Tyr | Glu | Ala | Arg | Ala | Leu | Gly | Tyr | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
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<210> 6253

<211> 1953

<212> DNA

<213> Homo sapiens

<400> 6253

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1920

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1953

<210> 6254

<211> 216

<212> PRT

<213> Homo sapiens

<400> 6254

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| Met | Ser | Phe | Leu | Phe | Ser | Ser | Arg | Ser | Ser | Lys | Thr | Phe | Lys | Pro | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Asn | Ile | Pro | Glu | Gly | Ser | His | Gln | Tyr | Glu | Leu | Leu | Lys | His | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ala | Thr | Leu | Gly | Ser | Gly | Asn | Leu | Arg | Gln | Ala | Val | Met | Leu | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Gly | Glu | Asp | Leu | Asn | Glu | Trp | Ile | Ala | Val | Asn | Thr | Val | Asp | Phe |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Asn | Gln | Ile | Asn | Met | Leu | Tyr | Gly | Thr | Ile | Thr | Glu | Phe | Cys | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Ala | Ser | Cys | Pro | Val | Met | Ser | Ala | Gly | Pro | Arg | Tyr | Glu | Tyr | His |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Trp | Ala | Asp | Gly | Thr | Asn | Ile | Lys | Lys | Pro | Ile | Lys | Cys | Ser | Ala | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Tyr | Ile | Asp | Tyr | Leu | Met | Thr | Trp | Val | Gln | Asp | Gln | Leu | Asp | Asp |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Thr | Leu | Phe | Pro | Ser | Lys | Ile | Gly | Val | Pro | Phe | Pro | Lys | Asn | Phe |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Met | Ser | Val | Ala | Lys | Thr | Ile | Leu | Lys | Arg | Leu | Phe | Arg | Val | Tyr | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| His | Ile | Tyr | His | Gln | His | Phe | Asp | Ser | Val | Met | Gln | Leu | Gln | Glu | Glu |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Ala | His | Leu | Asn | Thr | Ser | Phe | Lys | His | Phe | Ile | Phe | Phe | Val | Gln | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Phe | Asn | Leu | Ile | Asp | Arg | Arg | Glu | Leu | Ala | Pro | Leu | Gln | Glu | Leu | Ile |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Lys | Leu | Gly | Ser | Lys | Asp | Arg | | | | | | | | |
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<210> 6255

<211> 622

<212> DNA

<213> Homo sapiens

<400> 6255

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120
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180
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240

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 480
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<210> 6256

<211> 150

<212> PRT

<213> Homo sapiens

<400> 6256

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| Met | Pro | Leu | His | Ser | Ser | Leu | Gly | Asn | Arg | Val | Arg | Leu | His | Leu | Lys |
| 1 | | | | 5 | | | | 10 | | | | 15 | | | |
| Lys | Lys | Lys | Ala | Thr | Val | Ala | Ala | Phe | Thr | Ala | Ser | Glu | Gly | His | Ala |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| His | Pro | Arg | Val | Val | Glu | Leu | Pro | Lys | Thr | Asp | Glu | Gly | Leu | Gly | Phe |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Asn | Ile | Met | Gly | Gly | Lys | Glu | Gln | Asn | Ser | Pro | Ile | Tyr | Ile | Ser | Arg |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Val | Ile | Pro | Gly | Gly | Val | Ala | Asp | Arg | His | Gly | Gly | Leu | Lys | Arg | Gly |
| 65 | | | | 70 | | | | 75 | | | | 80 | | | |
| Asp | Gln | Leu | Leu | Ser | Val | Asn | Gly | Val | Ser | Val | Glu | Gly | Glu | Gln | His |
| | | | 85 | | | | | 90 | | | | 95 | | | |
| Glu | Lys | Ala | Val | Glu | Leu | Leu | Lys | Ala | Ala | Gln | Gly | Ser | Val | Lys | Leu |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Val | Val | Arg | Tyr | Thr | Pro | Arg | Val | Leu | Glu | Glu | Met | Glu | Ala | Arg | Phe |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Glu | Lys | Met | Arg | Ser | Ala | Arg | Arg | Arg | Gln | Gln | His | Gln | Ser | Tyr | Ser |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Ser | Leu | Glu | Ser | Arg | Gly | | | | | | | | | | |
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<210> 6257

<211> 2216

<212> DNA

<213> Homo sapiens

<400> 6257

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<210> 6258

<211> 340

<212> PRT

<213> Homo sapiens

<400> 6258

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Gln | Ala | Leu | Gln | Arg | Leu | His | Met | Thr | Ile | Phe | Ser | Gln | Ser | Val |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Ser | Pro | Cys | Gly | Lys | Phe | Leu | Ala | Ala | Gly | Asn | Asn | Tyr | Gly | Gln | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ile | Phe | Ser | Leu | Ser | Ser | Ala | Leu | Ser | Ser | Glu | Ala | Lys | Glu | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Lys | Lys | Pro | Val | Val | Thr | Phe | Gln | Ala | His | Asp | Gly | Pro | Val | Tyr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Met | Val | Ser | Thr | Asp | Arg | His | Leu | Leu | Ser | Ala | Gly | Asp | Gly | Glu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Val | Lys | Ala | Trp | Leu | Trp | Ala | Glu | Met | Leu | Lys | Lys | Gly | Cys | Lys | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Trp | Arg | Arg | Gln | Pro | Pro | Tyr | Arg | Thr | Ser | Leu | Glu | Val | Pro | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Asn | Ala | Leu | Leu | Leu | Val | Pro | Lys | Glu | Asn | Ser | Leu | Ile | Leu | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Gly | Asp | Cys | Gln | Leu | His | Thr | Met | Asp | Leu | Glu | Thr | Gly | Thr | Phe |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Arg | Val | Leu | Arg | Gly | His | Thr | Asp | Tyr | Ile | His | Cys | Leu | Ala | Leu |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Arg | Glu | Arg | Ser | Pro | Glu | Val | Leu | Ser | Gly | Gly | Glu | Asp | Gly | Ala | Val |
| | | | 180 | | | | | | 185 | | | | 190 | | |
| Arg | Leu | Trp | Asp | Leu | Arg | Thr | Ala | Lys | Glu | Val | Gln | Thr | Ile | Glu | Ser |
| | | 195 | | | | | 200 | | | | | | 205 | | |
| Ile | Ser | Thr | Arg | Ser | Ala | Arg | Gly | Pro | Thr | Met | Gly | Ala | Gly | Leu | Asp |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Val | Trp | Thr | Asp | Ser | Asp | Trp | Met | Val | Cys | Gly | Gly | Gly | Pro | Ala | Leu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Thr | Leu | Trp | His | Leu | Arg | Ser | Ser | Thr | Pro | Thr | Thr | Ile | Phe | Pro | Ile |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Arg | Ala | Pro | Gln | Lys | His | Val | Thr | Phe | Tyr | Gln | Asp | Leu | Ile | Leu | Ser |

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                275                280                285
Lys Ala Gln Val Pro Gly Ser Ser Pro Gly Leu Leu Ser Leu Ser Leu
                290                295                300
Asn Gln Gln Pro Ala Ala Pro Glu Cys Lys Val Leu Thr Ala Ala Gly
305                310                315                320
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<210> 6259
 <211> 384
 <212> DNA
 <213> Homo sapiens

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<210> 6260
 <211> 128
 <212> PRT
 <213> Homo sapiens

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Gln Lys Asn Glu Lys Ile Lys Tyr Ser Arg Phe Ala Ala Thr Asn Thr
35          40          45
Arg Val Lys Ala Lys Gln Lys Pro Leu Ile Ser Asn Ser His Thr Asp
50          55          60
His Leu Met Gly Cys Thr Lys Ser Ala Glu Pro Gly Thr Glu Thr Ser
65          70          75          80
Gln Val Asn Ser Phe Ser Asp Leu Lys Ala Ser Thr Leu Val His Lys
85          90          95
Pro Gln Ser Asp Phe Thr Asn Asp Ala Leu Ser Pro Lys Phe Asn Leu
100         105         110
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115

120

125

<210> 6261
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 <212> DNA
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<210> 6262

<211> 431

<212> PRT

<213> Homo sapiens

<400> 6262

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| Leu | Pro | Pro | Val | Lys | Arg | Ser | Leu | Val | Tyr | Tyr | Leu | Lys | Asn | Arg | Glu |
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| Val | Arg | Leu | Gln | Asn | Glu | Thr | Ser | Tyr | Ser | Arg | Val | Leu | His | Gly | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ala | Gln | Gln | Leu | Pro | Ser | Leu | Leu | Lys | Glu | Arg | Glu | Phe | His | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Thr | Leu | Asn | Lys | Val | Phe | Ala | Ser | Gln | Trp | Leu | Asn | His | Arg | Gln |
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| Val | Val | Cys | Gly | Thr | Lys | Cys | Asn | Thr | Leu | Phe | Val | Val | Asp | Val | Gln |
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| Asp Thr Asn Pro Asp Asn Cys Lys Val Arg Ala Leu Ala Phe Asn Asn | | |
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| Lys Asn Lys Glu Leu Gly Ala Val Ser Leu Asp Gly Tyr Phe His Leu | | |
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| Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu Leu Ser Thr Lys Leu Pro | | |
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| Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr Gly Ser Glu Trp Ser Val | | |
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| Tyr Ala Val Gly Ser Gln Ala His Val Ser Phe Leu Asp Pro Arg Gln | | |
| 290 | 295 | 300 |
| Pro Ser Tyr Asn Val Lys Ser Val Cys Ser Arg Glu Arg Gly Ser Gly | | |
| 305 | 310 | 315 |
| Ile Arg Ser Val Ser Phe Tyr Glu His Ile Ile Thr Val Gly Thr Gly | | |
| 325 | 330 | 335 |
| Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg Ala Gln Arg Phe Leu Glu | | |
| 340 | 345 | 350 |
| Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys Pro Arg Leu Ala Gly Glu | | |
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| Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp Leu Asn His Asp Glu Thr | | |
| 370 | 375 | 380 |
| Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe Phe Pro Asn Ala Val Tyr | | |
| 385 | 390 | 395 |
| Thr His Cys Tyr Asp Ser Ser Gly Thr Lys Leu Phe Val Ala Gly Gly | | |
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<211> 2508

<212> DNA

<213> Homo sapiens

<400> 6263

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<212> PRT

<213> Homo sapiens

<400> 6264

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Thr | Gly | Ile | Glu | Asn | Ile | Asp | Glu | Ala | Ile | Thr | Leu | Leu | Glu | Gln |
| | | | 20 | | | | | | 25 | | | | 30 | | |
| Asn | Asn | Trp | Asp | Leu | Val | Ala | Ala | Ile | Asn | Gly | Val | Ile | Pro | Gln | Glu |
| | | | 35 | | | | | | 40 | | | | 45 | | |
| Asn | Gly | Ile | Leu | Gln | Ser | Glu | Tyr | Gly | Gly | Glu | Thr | Ile | Pro | Gly | Pro |
| | | | 50 | | | | 55 | | | | | 60 | | | |
| Ala | Phe | Asn | Pro | Ala | Ser | His | Pro | Ala | Ser | Ala | Pro | Thr | Ser | Ser | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Ser | Ala | Phe | Arg | Pro | Val | Met | Pro | Ser | Arg | Gln | Ile | Val | Glu | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gln | Pro | Arg | Met | Leu | Asp | Phe | Arg | Val | Glu | Tyr | Arg | Asp | Arg | Asn | Val |
| | | | 100 | | | | | | 105 | | | | 110 | | |
| Asp | Val | Val | Leu | Glu | Asp | Thr | Cys | Thr | Val | Gly | Glu | Ile | Lys | Gln | Ile |
| | | | 115 | | | | | 120 | | | | | 125 | | |
| Leu | Glu | Asn | Glu | Leu | Gln | Ile | Pro | Val | Ser | Lys | Met | Leu | Leu | Lys | Gly |
| | | | 130 | | | | 135 | | | | | 140 | | | |
| Trp | Lys | Thr | Gly | Asp | Val | Glu | Asp | Ser | Thr | Val | Leu | Lys | Ser | Leu | His |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Pro | Lys | Asn | Asn | Ser | Leu | Tyr | Val | Leu | Thr | Pro | Asp | Leu | Pro | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Pro | Ser | Ser | Ser | Ser | His | Ala | Gly | Ala | Leu | Gln | Glu | Ser | Leu | Asn | Gln |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Phe | Met | Leu | Ile | Ile | Thr | His | Arg | Glu | Val | Gln | Arg | Glu | Tyr | Asn |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Asn | Phe | Ser | Gly | Ser | Ser | Thr | Ile | Gln | Glu | Val | Lys | Arg | Asn | Val |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| Tyr | Asp | Leu | Thr | Ser | Ile | Pro | Val | Arg | His | Gln | Leu | Trp | Glu | Gly | Trp |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Pro | Thr | Ser | Ala | Thr | Asp | Asp | Ser | Met | Cys | Leu | Ala | Glu | Ser | Gly | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ser | Tyr | Pro | Cys | His | Arg | Leu | Thr | Val | Gly | Arg | Arg | Ser | Ser | Pro | Ala |
| | | | 260 | | | | | 265 | | | | | 270 | | |
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305              310              315              320
Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp
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Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys
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His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala
      355              360              365
Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His
      370              375              380
His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys
385              390              395              400
Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala
      405              410              415
Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys
      420              425              430
Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys
      435              440              445
Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser
      450              455              460
Asn Glu Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu
465              470              475              480
Met Met Arg Leu Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln Gln
      485              490              495
Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys
      500              505              510
Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala
      515              520              525
Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu
      530              535              540
Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser
545              550              555              560
Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro
      565              570              575
Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg
      580              585              590
Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala
      595              600              605
Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro
      610              615              620
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<211> 1344

<212> DNA

<213> Homo sapiens

<400> 6265

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<211> 240

<212> PRT

<213> Homo sapiens

<400> 6266

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| | 20 | 25 | 30 |
| Ser Pro Asp | Asp Lys Glu Phe Gln Ser Val Glu Glu Glu Met Gln Ser | | |
| | 35 | 40 | 45 |
| Thr Val Arg | Glu His Arg Asp Gly Gly His Ala Gly Gly Ile Phe Asn | | |
| | 50 | 55 | 60 |
| Arg Tyr Asn | Ile Leu Lys Ile Gln Lys Val Cys Asn Lys Lys Leu Trp | | |
| 65 | 70 | 75 | 80 |
| Glu Arg Tyr | Thr His Arg Arg Lys Glu Val Ser Glu Glu Asn His Asn | | |
| | 85 | 90 | 95 |
| His Ala Asn | Glu Arg Met Leu Phe His Gly Ser Pro Phe Val Asn Ala | | |
| | 100 | 105 | 110 |
| Ile Ile His | Lys Gly Phe Asp Glu Arg His Ala Tyr Ile Gly Gly Met | | |
| | 115 | 120 | 125 |
| Phe Gly Ala | Gly Ile Tyr Phe Ala Glu Asn Ser Ser Lys Ser Asn Gln | | |
| | 130 | 135 | 140 |
| Tyr Val Tyr | Gly Ile Gly Gly Gly Thr Gly Cys Pro Val His Lys Asp | | |
| 145 | 150 | 155 | 160 |
| Arg Ser Cys | Tyr Ile Cys His Arg Gln Leu Leu Phe Cys Arg Val Thr | | |
| | 165 | 170 | 175 |
| Leu Gly Lys | Ser Phe Leu Gln Phe Ser Ala Met Lys Met Ala His Ser | | |
| | 180 | 185 | 190 |
| Pro Pro Gly | His His Ser Val Thr Gly Arg Pro Ser Val Asn Gly Leu | | |
| | 195 | 200 | 205 |
| Ala Leu Ala | Glu Tyr Val Ile Tyr Arg Gly Glu Gln Ala Tyr Pro Glu | | |
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| Tyr Leu Ile | Thr Tyr Gln Ile Met Arg Pro Glu Gly Met Val Asp Gly | | |
| 225 | 230 | 235 | 240 |

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<211> 328

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<213> Homo sapiens

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<213> Homo sapiens

<400> 6268

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<211> 307
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<400> 6270
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 Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
 50 55 60
 Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
 65 70 75 80
 Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
 85 90 95
 Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
 100 105 110
 Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
 115 120 125
 Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
 130 135 140
 Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
 145 150 155 160
 Gln Lys Gln Ile Phe Ser Pro Pro Pro Ala Gly Ser Val Ala Gly Ile
 165 170 175
 Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
 180 185 190
 Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
 195 200 205
 Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
 210 215 220
 Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
 225 230 235 240
 Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
 245 250 255
 Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
 260 265 270
 Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Pro Ser Tyr
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 <211> 1437
 <212> DNA
 <213> Homo sapiens

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<210> 6272

<211> 296

<212> PRT

<213> Homo sapiens

<400> 6272

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| 20 | 25 | 30 | |
| Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg | | | |
| 35 | 40 | 45 | |
| Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly | | | |
| 50 | 55 | 60 | |
| Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys | | | |
| 65 | 70 | 75 | 80 |
| Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly | | | |
| 85 | 90 | 95 | |
| Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser | | | |
| 100 | 105 | 110 | |
| Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys | | | |
| 115 | 120 | 125 | |
| Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn | | | |
| 130 | 135 | 140 | |
| Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly | | | |
| 145 | 150 | 155 | 160 |
| Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile | | | |
| 165 | 170 | 175 | |
| Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala | | | |
| 180 | 185 | 190 | |
| Pro Leu Ala Ser Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe | | | |
| 195 | 200 | 205 | |
| Phe Gly Leu Met Ala Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys | | | |
| 210 | 215 | 220 | |
| Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly | | | |
| 225 | 230 | 235 | 240 |
| Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu | | | |
| 245 | 250 | 255 | |
| Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg | | | |
| 260 | 265 | 270 | |
| Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val | | | |
| 275 | 280 | 285 | |
| Tyr Leu Leu Glu Asp Arg Thr Gln | | | |
| 290 | 295 | | |

<210> 6273

<211> 2355

<212> DNA

<213> Homo sapiens

<400> 6273

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120

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180

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240

gctgacaagc gggacccaga gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300

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 <211> 70
 <212> PRT
 <213> Homo sapiens

<400> 6274
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 <212> DNA
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 420

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<210> 6276

<211> 172

<212> PRT

<213> Homo sapiens

<400> 6276

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Ala | Glu | Glu | Met | Glu | Leu | Leu | Leu | Glu | Asn | Tyr | Tyr | Arg | Leu | Ala |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Asp | Asp | Leu | Ser | Asn | Ala | Ala | Arg | Glu | Leu | Arg | Val | Leu | Ile | Asp | Asp |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ser | Gln | Ser | Ile | Ile | Phe | Ile | Asn | Leu | Asp | Ser | His | Arg | Asn | Val | Met |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Arg | Leu | Asn | Leu | Gln | Leu | Thr | Met | Gly | Thr | Phe | Ser | Leu | Ser | Leu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 | | | | | | | | | |
| Phe | Gly | Leu | Met | Gly | Val | Ala | Phe | Gly | Met | Asn | Leu | Glu | Ser | Ser | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Glu | Asp | His | Arg | Ile | Phe | Trp | Leu | Ile | Thr | Gly | Ile | Met | Phe | Met |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Ser | Gly | Leu | Ile | Trp | Arg | Arg | Leu | Leu | Ser | Phe | Leu | Gly | Arg | Gln |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Leu | Glu | Ala | Pro | Leu | Pro | Pro | Met | Met | Ala | Ser | Leu | Pro | Lys | Lys | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Leu | Ala | Asp | Arg | Ser | Met | Glu | Leu | Lys | Asn | Ser | Leu | Arg | Leu | Asp |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Gly | Leu | Gly | Ser | Gly | Arg | Ser | Ile | Leu | Thr | Asn | Arg | | | | |
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<210> 6277

<211> 1206

<212> DNA

<213> Homo sapiens

<400> 6277

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<210> 6278

<211> 399

<212> PRT

<213> Homo sapiens

<400> 6278

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Val | Lys | Leu | Met | Asp | Phe | Gln | Ala | His | Arg | Arg | Gly | Gly | Thr | Leu |
| | | 20 | | | | | 25 | | | | | | 30 | | |
| Asn | Arg | Lys | His | Ile | Ser | Pro | Ala | Phe | Gln | Pro | Pro | Leu | Pro | Pro | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Gly | Ser | Thr | Val | Val | Pro | Ala | Gly | Pro | Glu | Pro | Pro | Pro | Gln | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Arg | Ala | Glu | Ser | Ser | Ser | Gly | Gly | Gly | Thr | Val | Pro | Ser | Ser | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Ile | Leu | Glu | Gln | Gly | Pro | Ser | Pro | Gly | Asp | Gly | Ser | Pro | Pro | Lys |
| | | | | 85 | | | | | 90 | | | | 95 | | |
| Pro | Lys | Asp | Pro | Val | Ser | Ala | Ala | Val | Pro | Ala | Pro | Xaa | Glu | Lys | Gln |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Gln | Ser | Asp | Ser | Ile | Trp | Pro | Lys | Ser | Ala | Pro | Gly | Ser | Cys | Trp | Leu |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Pro | Pro | Ala | Leu | His | Gly | Pro | Pro | His | Asn | Ala | Ala | Gly | Pro | Ser | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | Thr | Leu | Arg | Arg | Ala | Val | Lys | Lys | Pro | Ala | Pro | Ala | Pro | Pro | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Gly | Asn | Pro | Pro | Pro | Gly | His | Pro | Gly | Gly | Gln | Ser | Ser | Ser | Gly |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Thr | Ser | Gln | His | Pro | Pro | Ser | Leu | Ser | Pro | Lys | Pro | Pro | Thr | Arg | Ser |
| | | 180 | | | | | | | 185 | | | | 190 | | |
| Pro | Ser | Pro | Pro | Pro | Ser | Thr | Arg | Ala | Ser | Leu | Gln | Ala | Ser | Pro | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Pro | Pro | Ser | Ser | Gln | His | Pro | Gly | Gly | Thr | Pro | Xaa | Ser | Leu | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Pro | Ile | Gln | Ala | Pro | Asn | His | Pro | Pro | Pro | Gln | Pro | Pro | Thr | Gln | Ala |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Thr | Pro | Leu | Met | His | Thr | Lys | Pro | Asn | Ser | Gln | Gly | Pro | Pro | Asn | Pro |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Met | Ala | Leu | Pro | Ser | Glu | His | Gly | Leu | Glu | Gln | Pro | Ser | His | Thr | Pro |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Pro | Gln | Thr | Pro | Thr | Pro | Pro | Ser | Thr | Pro | Pro | Leu | Gly | Lys | Gln | Asn |
| | | 275 | | | | | 280 | | | | | | 285 | | |
| Pro | Ser | Leu | Pro | Ala | Pro | Gln | Thr | Leu | Ala | Gly | Gly | Asn | Pro | Glu | Thr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ala | Gln | Pro | His | Ala | Gly | Thr | Leu | Pro | Arg | Pro | Arg | Pro | Val | Pro | Lys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 305 | | 310 | | 315 | | 320 | | | | | | | | | |
| Pro | Arg | Asn | Arg | Pro | Ser | Val | Pro | Pro | Pro | Gln | Pro | Pro | Gly | Val | |
| | | 325 | | 330 | | 335 | | | | | | | | | |
| His | Ser | Ala | Gly | Asp | Ser | Ser | Leu | Thr | Asn | Thr | Ala | Pro | Thr | Ala | Ser |
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<213> Homo sapiens

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<213> Homo sapiens

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| Lys | Pro | Ile | His | Val | Phe | Phe | Gly | Ala | Ala | Ile | Leu | Ser | Leu | Ser | Ile |
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| Ala | Ser | Val | Ile | Ser | Gly | Ile | Asn | Glu | Lys | Leu | Phe | Phe | Ser | Leu | Lys |
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| Asn | Thr | Thr | Arg | Pro | Tyr | His | Ser | Leu | Pro | Ser | Glu | Ala | Val | Phe | Ala |
| 65 | | | 70 | | | | | 75 | | | | | 80 | | |
| Asn | Ser | Thr | Gly | Met | Leu | Val | Val | Ala | Phe | Gly | Leu | Leu | Val | Leu | Tyr |
| | | 85 | | | | | 90 | | | | 95 | | | | |
| Ile | Leu | Leu | Ala | Ser | Ser | Trp | Lys | Arg | Pro | Glu | Pro | Gly | Ile | Leu | Thr |
| | 100 | | | | | 105 | | | | | 110 | | | | |
| Asp | Arg | Gln | Pro | Leu | Leu | His | Asp | Gly | Glu | | | | | | |
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<211> 57

<212> PRT

<213> Homo sapiens

<400> 6286

| | | | | | | | | | | | | | | | |
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| Pro | Gly | Pro | Ala | Ala | Ala | Ser | Ala | Ala | Pro | Gly | Pro | Leu | Ala | Ser | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Cys | Gly | Gln | His | Glu | Gln | Gln | Ile | Pro | Pro | Asp | His | His | Lys | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Gly | Asn | Ile | Tyr | Leu | Gly | Thr | Ser | Pro | Pro | Ser | Gln | Glu | Pro | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Pro | Trp | Ala | Ser | Trp | His | Arg | Ser | | | | | | | |
| 50 | | | | | | 55 | | | | | | | | | |

<210> 6287

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 6287

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<210> 6288

<211> 269
 <212> PRT
 <213> Homo sapiens

<400> 6288
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 35 40 45
 Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
 50 55 60
 Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
 65 70 75 80
 Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
 85 90 95
 Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
 100 105 110
 Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
 115 120 125
 Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Glu Ile Trp Phe
 130 135 140
 Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
 145 150 155 160
 Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
 165 170 175
 Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
 180 185 190
 Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
 195 200 205
 Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
 210 215 220
 Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
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 260 265

<210> 6289
 <211> 1321
 <212> DNA
 <213> Homo sapiens

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 420
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 480
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 540
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 660
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 780
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 960
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<210> 6290

<211> 172

<212> PRT

<213> Homo sapiens

<400> 6290

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Val | Pro | Gly | Pro | Ser | Ser | Pro | Asp | Gly | Ala | Leu | Thr | Arg | Pro |
| 1 | | | 5 | | | | | 10 | | | | | | 15 | |
| Pro | Tyr | Cys | Leu | Glu | Ala | Gly | Glu | Pro | Thr | Pro | Gly | Leu | Ser | Asp | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Pro | Asp | Glu | Gly | Leu | Ile | Glu | Asp | Leu | Thr | Ile | Glu | Asp | Lys | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Val | Glu | Gln | Leu | Ala | Glu | Gly | Leu | Leu | Ser | His | Tyr | Leu | Pro | Asp | Leu |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Gln | Arg | Ser | Lys | Gln | Ala | Leu | Gln | Glu | Leu | Thr | Gln | Asn | Gln | Val | Val |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 | | | | | | | | | |
| Leu | Leu | Asp | Thr | Leu | Glu | Gln | Glu | Ile | Ser | Lys | Phe | Lys | Glu | Cys | His |
| | | 85 | | 90 | | 95 | | | | | | | | | |
| Ser | Met | Leu | Asp | Ile | Asn | Ala | Leu | Phe | Ala | Glu | Ala | Lys | His | Tyr | His |
| | | 100 | | 105 | | 110 | | | | | | | | | |
| Ala | Lys | Leu | Val | Asn | Ile | Arg | Lys | Glu | Met | Leu | Met | Leu | His | Glu | Lys |
| | | 115 | | 120 | | 125 | | | | | | | | | |
| Thr | Ser | Lys | Leu | Lys | Lys | Arg | Ala | Leu | Lys | Leu | Gln | Gln | Lys | Arg | Gln |
| | | 130 | | 135 | | 140 | | | | | | | | | |
| Lys | Glu | Glu | Leu | Glu | Arg | Glu | Gln | Gln | Arg | Glu | Lys | Gly | Phe | Glu | Arg |
| 145 | | 150 | | 155 | | 160 | | | | | | | | | |
| Glu | Lys | Gln | Leu | Thr | Ala | Arg | Pro | Ala | Lys | Arg | Met | | | | |
| | | 165 | | 170 | | | | | | | | | | | |

<210> 6291

<211> 2718

<212> DNA

<213> Homo sapiens

<400> 6291

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300
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420
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480
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1020

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<210> 6292
<211> 497
<212> PRT
<213> Homo sapiens
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5477

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| | 340 | | 345 | | 350 | | | | | | | | | | |
| Arg | Ile | Leu | Glu | Ala | His | Gln | Asn | Val | Ala | Gln | Leu | Ser | Leu | Ala | Glu |
| | 355 | | | | | 360 | | | | | 365 | | | | |
| Ala | Gln | Leu | Arg | Phe | Ile | Gln | Ala | Trp | Gln | Ser | Leu | Pro | Asp | Phe | Gly |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Ile | Ser | Tyr | Val | Met | Val | Arg | Phe | Lys | Gly | Ser | Arg | Lys | Asp | Glu | Ile |
| 385 | | | | | 390 | | | | | 395 | | | | 400 | |
| Leu | Gly | Ile | Ala | Asn | Asn | Arg | Leu | Ile | Arg | Ile | Asp | Leu | Ala | Val | Gly |
| | | | 405 | | | | | 410 | | | | | 415 | | |
| Asp | Val | Val | Lys | Thr | Trp | Arg | Phe | Ser | Asn | Met | Arg | Gln | Trp | Asn | Val |
| | | 420 | | | | | 425 | | | | | 430 | | | |
| Asn | Trp | Asp | Ile | Arg | Gln | Val | Ala | Ile | Glu | Phe | Asp | Glu | His | Ile | Asn |
| | 435 | | | | | 440 | | | | | 445 | | | | |
| Val | Ala | Phe | Ser | Cys | Val | Ser | Ala | Ser | Cys | Arg | Ile | Val | His | Glu | Tyr |
| | 450 | | | | 455 | | | | | 460 | | | | | |
| Ile | Gly | Gly | Tyr | Ile | Phe | Leu | Ser | Thr | Arg | Glu | Arg | Ala | Arg | Gly | Glu |
| 465 | | | | 470 | | | | 475 | | | | | 480 | | |
| Glu | Leu | Asp | Glu | Asp | Leu | Phe | Leu | Gln | Leu | Thr | Gly | Gly | His | Glu | Ala |
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| Phe | | | | | | | | | | | | | | | |

<210> 6293

<211> 750

<212> DNA

<213> Homo sapiens

<400> 6293

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<210> 6294
 <211> 250
 <212> PRT
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<400> 6294
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 35 40 45
 Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
 50 55 60
 Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
 65 70 75 80
 Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Ala Cys Gln Ile Leu Lys
 85 90 95
 Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
 100 105 110
 Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
 115 120 125
 Asp Ala Gly Glu Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
 130 135 140
 Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
 145 150 155 160
 Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Val Gly Pro Tyr
 165 170 175
 Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
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 Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
 195 200 205
 Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
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 <212> DNA
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 1920
 cagacttggg ccgagcgggc cccagccctc ttcattgttc gaagtgtagt cttgaggccc
 1980
 tggtgccgca cttctagcat gttggtctcc tttagtgggg ctatttttaa tgagagaaaa
 2040
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 2091

<210> 6296

<211> 399

<212> PRT

<213> Homo sapiens

<400> 6296

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| Met | Ala | Phe | Trp | Gly | Trp | Arg | Ala | Ala | Ala | Ala | Leu | Arg | Leu | Trp | Gly |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Arg | Val | Val | Glu | Arg | Val | Glu | Ala | Gly | Gly | Gly | Val | Gly | Pro | Phe | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Cys | Gly | Cys | Arg | Leu | Val | Leu | Gly | Gly | Arg | Asp | Asp | Val | Ser | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Leu | Arg | Gly | Ser | His | Gly | Ala | Arg | Gly | Glu | Pro | Leu | Asp | Pro | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Pro | Leu | Gln | Arg | Pro | Pro | Arg | Pro | Glu | Val | Pro | Arg | Ala | Phe | Arg |
| 65 | | | | 70 | | | | | | 75 | | | | | 80 |
| Arg | Gln | Pro | Arg | Ala | Ala | Ala | Pro | Ser | Phe | Phe | Phe | Ser | Ser | Ile | Lys |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Gly | Gly | Arg | Arg | Ser | Ile | Ser | Phe | Ser | Val | Gly | Ala | Ser | Ser | Val | Val |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Gly | Ser | Gly | Gly | Ser | Ser | Asp | Lys | Gly | Lys | Leu | Ser | Leu | Gln | Asp | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Glu | Leu | Ile | Arg | Ala | Arg | Ala | Cys | Gln | Arg | Val | Val | Val | Met | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Ala | Gly | Ile | Ser | Thr | Pro | Ser | Gly | Ile | Pro | Asp | Phe | Arg | Ser | Pro |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | Ser | Gly | Leu | Tyr | Ser | Asn | Leu | Gln | Gln | Tyr | Asp | Leu | Pro | Tyr | Pro |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Glu | Ala | Ile | Phe | Glu | Leu | Pro | Phe | Phe | His | Asn | Pro | Lys | Pro | Phe | |
| | | 180 | | | | | | 185 | | | | 190 | | | |
| Phe | Thr | Leu | Ala | Lys | Glu | Leu | Tyr | Pro | Gly | Asn | Tyr | Lys | Pro | Asn | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | His | Tyr | Phe | Leu | Arg | Leu | Leu | His | Asp | Lys | Gly | Leu | Leu | Leu | Arg |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Leu | Tyr | Thr | Gln | Asn | Ile | Asp | Gly | Leu | Glu | Arg | Val | Ser | Gly | Ile | Pro |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Ser | Lys | Leu | Val | Glu | Ala | His | Gly | Thr | Phe | Ala | Ser | Ala | Thr | Cys |
| | | | 245 | | | | | 250 | | | | | | 255 | |
| Thr | Val | Cys | Gln | Arg | Pro | Phe | Pro | Gly | Glu | Asp | Ile | Arg | Ala | Asp | Val |
| | | 260 | | | | | | 265 | | | | 270 | | | |
| Met | Ala | Asp | Arg | Val | Pro | Arg | Cys | Pro | Val | Cys | Thr | Gly | Val | Val | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Pro | Asp | Ile | Val | Phe | Phe | Gly | Glu | Pro | Leu | Pro | Gln | Arg | Phe | Leu | Leu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| His | Val | Val | Asp | Phe | Pro | Met | Ala | Asp | Leu | Leu | Leu | Ile | Leu | Gly | Thr |

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305          310          315          320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
          325          330          335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
          340          345          350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
          355          360          365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
          370          375          380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
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<210> 6297

<211> 472

<212> DNA

<213> Homo sapiens

<400> 6297

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120
ttcggaagcc cggttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
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240
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360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtccctgc
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<210> 6298

<211> 146

<212> PRT

<213> Homo sapiens

<400> 6298

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          20          25          30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
          35          40          45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
          50          55          60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65          70          75          80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
          85          90          95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys

```

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Gln | Leu | Lys | Val | Leu | Leu | Ser | Gly | Lys | Asp | Gly | Cys | Pro | Ala | Gln | Ser |
| | 115 | | 120 | | 125 | | | | | | | | | | |
| Cys | Ala | Leu | Arg | Gln | Pro | Ala | Pro | Arg | Val | Cys | Gly | Asp | Ala | Val | Gly |
| | 130 | | 135 | | 140 | | | | | | | | | | |
| Cys | Ala | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | |

<210> 6299

<211> 1466

<212> DNA

<213> Homo sapiens

<400> 6299

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 120
 ggcgccagc cgcgccattg gccagggag agcctgggttc tgtaccactg gaccagttcc
 180
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 240
 gacgtgagcc tgccacagag cgagcacaag gagccctggt tcatgaggct caacctgggc
 300
 gaggaggtgc ccgtcatcat ccaccgcgac aacatcatca gtgactatga ccagatcatt
 360
 gactatgtgg agcgcacctt cacaggagag cacgtgggtg ccctgatgcc cgagggtggc
 420
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 480
 gcctacacgc atggetgcat cctgcatccc gagctcacca ccgactccat gatccccaa
 540
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 660
 gccaatgctc tggagcatga tgatgtgagc tacctgaaga agatcctcgg ggaactggcc
 720
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 780
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 1200

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 1260
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 1320
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 1380
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 1466

<210> 6300

<211> 372

<212> PRT

<213> Homo sapiens

<400> 6300

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| Leu | Ile | Pro | Gly | Cys | His | Gly | Asp | Pro | Gln | Gln | Ser | Asp | Pro | His | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Gln | Leu | Val | Ala | His | Leu | Arg | Ala | Gly | Glu | Arg | Cys | Gly | Gln | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Gly | Pro | Arg | Arg | Ser | Arg | Gly | Gly | Gln | Pro | Ala | His | Trp | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Arg | Glu | Ser | Leu | Val | Leu | Tyr | His | Trp | Thr | Gln | Ser | Phe | Ser | Ser | Gln |
| | | | 50 | | | 55 | | | | 60 | | | | | |
| Lys | Val | Arg | Leu | Val | Ile | Ala | Glu | Lys | Gly | Leu | Val | Cys | Glu | Glu | Arg |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Val | Ser | Leu | Pro | Gln | Ser | Glu | His | Lys | Glu | Pro | Trp | Phe | Met | Arg |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Leu | Asn | Leu | Gly | Glu | Glu | Val | Pro | Val | Ile | Ile | His | Arg | Asp | Asn | Ile |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Ile | Ser | Asp | Tyr | Asp | Gln | Ile | Ile | Asp | Tyr | Val | Glu | Arg | Thr | Phe | Thr |
| | | | 115 | | | 120 | | | | | | 125 | | | |
| Gly | Glu | His | Val | Val | Ala | Leu | Met | Pro | Glu | Val | Gly | Ser | Leu | Gln | His |
| | | | 130 | | | 135 | | | | | 140 | | | | |
| Ala | Arg | Val | Leu | Gln | Tyr | Arg | Glu | Leu | Leu | Asp | Ala | Leu | Pro | Met | Asp |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ala | Tyr | Thr | His | Gly | Cys | Ile | Leu | His | Pro | Glu | Leu | Thr | Thr | Asp | Ser |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Met | Ile | Pro | Lys | Tyr | Ala | Thr | Ala | Glu | Ile | Arg | Arg | His | Leu | Ala | Asn |
| | | | 180 | | | | 185 | | | | | 190 | | | |
| Ala | Thr | Thr | Asp | Leu | Met | Lys | Leu | Asp | His | Glu | Glu | Glu | Pro | Gln | Leu |
| | | | 195 | | | 200 | | | | | 205 | | | | |
| Ser | Glu | Pro | Tyr | Leu | Ser | Lys | Gln | Lys | Lys | Leu | Met | Ala | Lys | Ile | Leu |
| | | | 210 | | | 215 | | | | | 220 | | | | |
| Glu | His | Asp | Asp | Val | Ser | Tyr | Leu | Lys | Lys | Ile | Leu | Gly | Glu | Leu | Ala |
| 225 | | | | 230 | | | | | 235 | | | | | 240 | |
| Met | Val | Leu | Asp | Gln | Ile | Glu | Ala | Glu | Leu | Glu | Lys | Arg | Lys | Leu | Glu |
| | | | 245 | | | | | 250 | | | | | | 255 | |
| Asn | Glu | Gly | Gln | Lys | Cys | Glu | Leu | Trp | Leu | Cys | Gly | Cys | Ala | Phe | Thr |
| | | | 260 | | | | 265 | | | | | 270 | | | |
| Leu | Ala | Asp | Val | Leu | Leu | Gly | Ala | Thr | Leu | His | Arg | Leu | Lys | Phe | Leu |
| | | | 275 | | | | 280 | | | | | 285 | | | |
| Gly | Leu | Ser | Lys | Lys | Tyr | Trp | Glu | Asp | Gly | Ser | Arg | Pro | Asn | Leu | Gln |

| | | |
|---|-----|-----|
| 290 | 295 | 300 |
| Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu | | |
| 305 | 310 | 315 |
| Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe | | 320 |
| | 325 | 330 |
| Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu | | 335 |
| | 340 | 345 |
| Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys | | 350 |
| | 355 | 360 |
| Lys Lys Tyr Ile | | 365 |
| 370 | | |

<210> 6301

<211> 911

<212> DNA

<213> Homo sapiens

<400> 6301

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120
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180
cgccacagca gtggaagcct tactcccccc gtgacccac ccacacccc ctctcttca
240
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300
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360
tccatgtgca tgaatggagg ggaagagaag ccttttgcct gccagttcc tggatgtaaa
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480
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<210> 6302

<211> 202

<212> PRT

<213> Homo sapiens

<400> 6302

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 35 40 45
 Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
 50 55 60
 Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
 65 70 75 80
 Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
 85 90 95
 Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
 100 105 110
 Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
 115 120 125
 Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
 130 135 140
 Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
 145 150 155 160
 Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
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 Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
 180 185 190
 Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
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<210> 6303

<211> 676

<212> DNA

<213> Homo sapiens

<400> 6303

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 180
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 300
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 360
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 420
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 480
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<210> 6304
 <211> 181
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
 50 55 60
 Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
 65 70 75 80
 Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
 85 90 95
 Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala
 100 105 110
 Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
 115 120 125
 Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
 130 135 140
 Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
 145 150 155 160
 Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
 165 170 175
 Glu Lys Phe Ser Val
 180

<210> 6305
 <211> 3853
 <212> DNA
 <213> Homo sapiens

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1980
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2040
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<213> Homo sapiens

<400> 6306

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| Tyr | Asp | Pro | Asp | Thr | Ser | Ile | Ile | Tyr | Leu | Cys | Gly | Lys | Gly | Asp | Ser |

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| Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe | | |
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| Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg | | |
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| Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro | | |
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| Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp | | |
| | 370 | 375 |
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| | 420 | 425 |
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<212> DNA

<213> Homo sapiens

<400> 6307

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Phe Ile Gln Arg Phe Glu Met Lys Arg Ser Pro Glu Glu Lys Gln Glu
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<212> PRT

<213> Homo sapiens

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| Gln | Ile | Lys | Thr | Phe | Leu | Leu | His | Ser | His | Gly | Leu | Ala | His | Val | Trp |
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| His | Leu | Gln | Thr | Asn | Lys | Cys | Leu | Val | Ala | Gln | Gly | Arg | Pro | Ser | Gln |
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| Lys | Gly | Gly | Leu | Val | Val | Leu | Lys | Ala | Cys | Asp | Tyr | Ser | Asp | Pro | Asn |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Gln | Ile | Trp | Ile | Tyr | Asn | Glu | Glu | His | Glu | Leu | Val | Leu | Asn | Ser | Leu |
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| Leu | Cys | Leu | Asp | Met | Ser | Glu | Thr | Arg | Ser | Ser | Asp | Pro | Pro | Arg | Leu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Met | Lys | Cys | His | Gly | Ser | Gly | Gly | Ser | Gln | Gln | Trp | Thr | Phe | Gly | Lys |
| | | 180 | | | | | 185 | | | | | | 190 | | |
| Asn | Asn | Arg | Leu | Tyr | Gln | Val | Ser | Val | Gly | Gln | Cys | Leu | Arg | Ala | Val |
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| Asp | Pro | Leu | Gly | Gln | Lys | Gly | Ser | Val | Ala | Met | Ala | Ile | Cys | Asp | Gly |
| | 210 | | | | 215 | | | | | | 220 | | | | |
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<211> 725

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<211> 175

<212> PRT

<213> Homo sapiens

<400> 6314

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| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
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What is claimed is:

1. An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2 n , wherein n is any integer 1-3161, or the complement thereof.

2. The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2 n , wherein n is any integer 1-3161, or the complement thereof.

3. The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n , wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n .

4. The isolated nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n , wherein n is any integer 1-3161.

5. The isolated nucleic acid molecule of claim 1, wherein said molecule comprises the sequence of nucleotides selected from the group consisting of SEQ ID NO:2 n -1, wherein n is any integer 1-3161, or the complement thereof.

6. An oligonucleotide less than 100 nucleotides in length and comprising at least contiguous nucleotides selected from the group consisting of SEQ ID NO:2 n -1, wherein n is any integer 1-3161, or the complement thereof.

7. A vector comprising the nucleic acid molecule of claim 1.

8. The vector of claim 7, wherein said vector is an expression vector.
9. A host cell comprising the isolated nucleic acid molecule of claim 1.
10. A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2*n*, wherein *n* is any integer 1-3161.
11. The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 2*n*, wherein *n* is any integer 1-3161.
12. An antibody that selectively binds to the polypeptide of claim 10.
13. A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
 - a) the nucleic acid of claim 1;
 - b) the polypeptide of claim 10; and
 - c) the antibody of claim 12;and a pharmaceutically acceptable carrier.
14. A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.
15. A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.
16. A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

compound, and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17. A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe or primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18. A method for modulating the activity of the polypeptide of claim 10, the method comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.

19. The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected from the group consisting of:

- a) the nucleic acid of claim 1;
- b) the polypeptide of claim 10; and
- c) the antibody of claim 12.

20. A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

- a) contacting a test compound with the polypeptide of claim 10; and
- b) determining if said test compound binds to said polypeptide,

wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21. A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

- a) administering a test compound to a test subject at an increased risk ORFX-associated disorder, wherein said test subject recombinantly expresses a polypeptide encoded by the nucleotide of claim 1;

- b) measuring expression the activity of said protein in said test subject;
- c) measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and
- d) comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predisposition to an ORFX-associated disorder.

22. The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23. A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

- a) measuring the amount of the polypeptide in a sample from said subject; and
- b) comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24. The method of claim 23, wherein said subject is a human.

25. A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

- a) measuring the amount of the nucleic acid in a sample from the mammalian subject; and
- b) comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of the nucleic acid in step (a) as compared to the control sample indicates the presence of or predisposition to said disease in said subject.

26. The method of claim 25, wherein said subject is a human.

27. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological condition.

28. The method of claim 27, wherein said subject is a human.

29. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said pathological condition.

30. The method of claim 29, wherein said subject is a human.

31. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological condition.

32. The method of claim 31, wherein said subject is a human.